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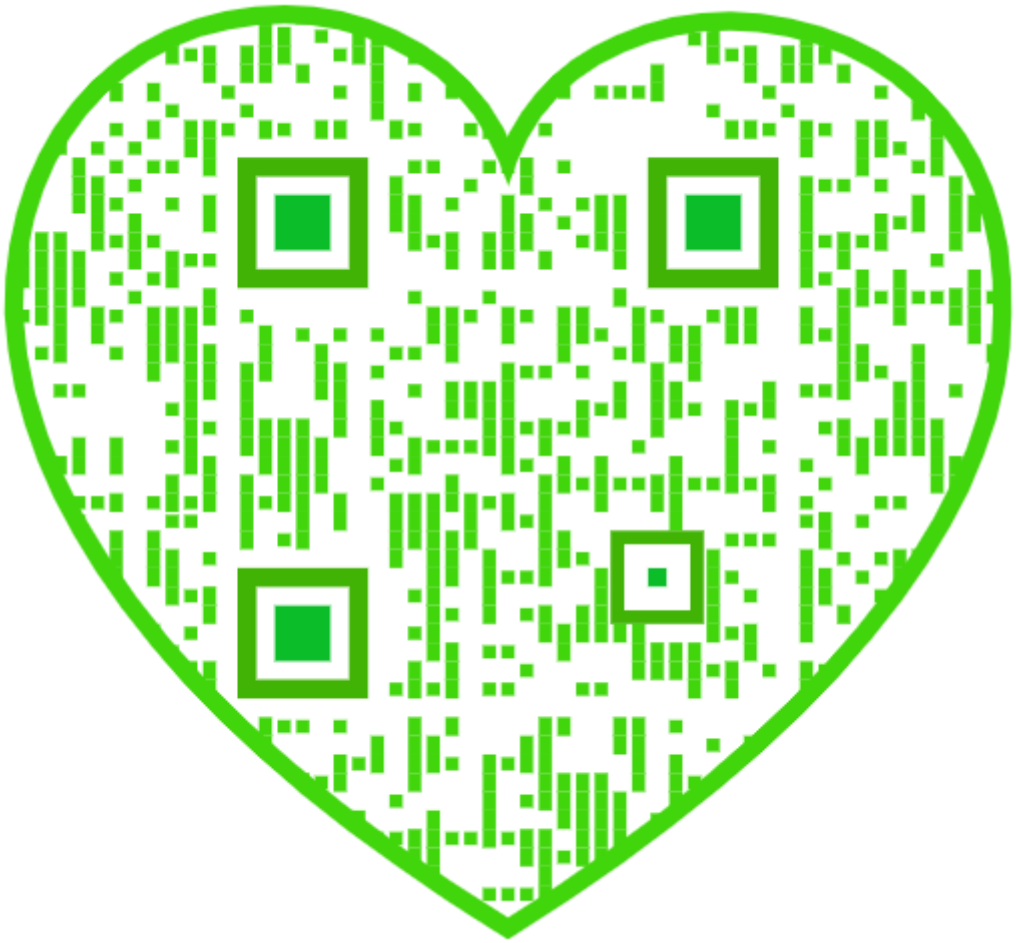

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THE

British Bee Journal,

AND BEE-KEEPERS' ADVISER.

EDITED BY

THOMAS WM. COWAN, F.G.S., F.L.S., F.R.M.S., &c.,

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W. HERROD-HEMPSALL, F.E.S.

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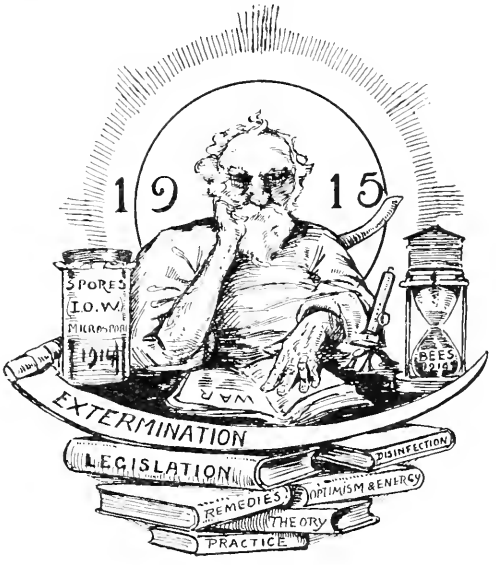


1915's PROBLEM.
From a Correspondent.

Editorial

VOLUME FORTY-THREE.

It is somewhat difficult to know what to say to our readers in the opening lines of Vol. Forty-three. We are, it is true, concerned primarily with bee-keeping, but the terrible war clouds overshadow everything. Unfortunately, at present there is no sign of their lifting, and both our readers and ourselves are more or less affected by them—not that we are at all pessimistic or in any doubt but that from the present struggle our allies and ourselves will come out "on top," for as a nation our conscience is clear and "Thrice armed is he who hath his quarrel just."

In the first place, we would put on record our gratitude to our readers for their support during the troublous times already passed through. Scores of magazines have been obliged to suspend publication during the last five months, but we are pleased to say that both the JOURNAL and RECORD are still going strong—much better than at one time we had dared to hope. Many of our readers are doing their duty bravely at the front, and others are training, ready to take their place in the fighting line. Most of these have been unable to attend to the feeding and packing of their bees for the winter, but have had to trust to the help of their fellow bee-keepers to do this for them—help that has been most cheerfully given.

The past season may be classed as a good one. In most localities both clover and sainfoin have yielded well, especially the latter, and there has been an almost entire absence of honey dew. The crop of heather honey has been good. The reports received from those bee-keepers who are near the moors, or who move their bees to the moors for the heather harvest, all say that the bees have done remarkably well on the heather. There have been no startling innovations in appliances. Mr. Watts has introduced a new super clearer, which is well spoken of, and Mr. E. H. Taylor has brought out an improved queen excluder. There has been very little scope for exhibitors since July, shows being cancelled wholesale, and it is quite possible that many will not be held again until peace is restored. Even so large an organisation as the Royal Agricultural Society is feeling the effects of the war, and is perforce dropping several departments at the show at Nottingham this year—a fate that would have befallen the "Hives and Honey" department but for the prompt action of the council and secretary of the B.B.K.A. and the opening of a fund to which our readers are most cordially invited to subscribe, if only a modest sixpence. We are aware that there are numberless calls for sick and wounded and refugees to which bee-keepers have liber-

ally subscribed, both in cash and kind, but we feel sure all will agree that it would be nothing less than a calamity for our department to drop out of the Royal Show even for one season.

There is no doubt that bee-keeping still progresses. The number of bee-keepers would no doubt be larger were it not for the ravages of that scourge known as the "Isle of Wight" disease, but there was never so much intelligence and keenness brought to bear on the work as now. The number of candidates for the various examinations held by the B.B.K.A. and the large percentage of "passes" prove this. A few years ago bee-keepers who held a third class certificate were not so very numerous. The second class were rather rare, while a "first class" man was a *rara avis*, if one may use the expression. At the present time there are probably hundreds of bee-keepers who have passed the "preliminary" examination, as it is now termed, and a number of our county associations can boast one or more who have passed the "final." All this in spite of the fact that the examinations are now much stiffer than formerly. Comparisons are said to be odious, but we venture to say that a comparison of the exhibits at honey shows at the present time with those of only a few years ago will also prove that bee-keeping has made progress. We may therefore look forward to the continued success of our craft with confidence.

Unfortunately, we are still without a reliable cure for "Isle of Wight" disease that has stood the test of time, but many minds are at work on the problem, so we may hope that a remedy may be found. There are signs that the disease is wearing itself out, or that bees are becoming more or less "immune" to it.

Our readers will notice that the appearance of the front of the JOURNAL has been improved. We are indebted to one of our readers—Mr. F. W. Harper—for the design of the new heading.

We most heartily wish all bee-keepers, and our readers in particular, a prosperous season during 1915, and pray that we may shortly be able to pursue bee-keeping and all other avocations in peace.

EDITORS.

REVIEWS OF FOREIGN BEE JOURNALS

By Nemo.

Iodised Honey, or Iodine and Tannin in Perfect Combination with Honey.—M. P. Aristée, writing in *l'Apiculteur*, says that the compounds of iodine are the most efficacious of those known in medicine. In combination with tannin, and especially with honey, iodine retains all its powerful properties, and has no longer the serious inconvenience which prevents its use in certain disorders where it is almost indispensable. Iodised honey, called *iodomel*, is therefore invaluable in cases where the organism is enfeebled or debilitated by whatever cause, illness, overwork, neurasthenia, &c. It acts as a first-class depurative, giving to the blood fluidity and vigour, rendering the arterial and venal walls supple, and by this means facilitates circulation. It is pre-eminently the preventive of arterial sclerosis, and of all ailments which proceed from this. Iodomel replaces with advantage cod-liver oil. In a small volume it combines all its active principles, and does not produce the nausea which makes cod-liver oil so repugnant to many invalids. It agrees with children, who take it with pleasure, and it has an advantage in that it can be given even in considerable doses without danger.

Coverings for Hives.—Last winter the Editor of the *Schweitzerische Bienenzeitung* carried out a series of experiments with a view to ascertaining the most suitable covering for hives. On the first series of hives he placed simply the ordinary mattress or quilt. The mattress used is made of a frame of wood about an inch thick with sacking nailed on top and bottom, the space between being filled with chaff or dried moss. The second series of hives had a deal board put over the mattress. In a third series a sheet of tin, kept down by a brick, was placed on the mattress. The following were the results of this wintering experiment: In the first series all the hives were perfectly dry, in the second there was very strong condensation of moisture on the hive sides, while in the third series, after a very short time, the sides and windows were streaming with wet and partly covered with ice. In German Switzerland it is usual to have strips of wood covering the tops of the frames, and although the bees propolise the joints there are generally here and there small holes where the vitiated air can escape. The above experiments show that the porous covering has the advantage over one impervious to moisture.

Study of the Medicinal Action of Honey.—M. Sabouret, in an article on this subject in *l'Abeille de l'Est* says that all know that frequently the use of honey renders good service in affections of the throat, and asks why it does not invariably do so. In some cases even it has been known not only to be in-

efficacious, but positively injurious. Few persons can give a reason because the study of the properties of different sorts of honey have not been carried out separately, and the study is still in its infancy. Among consumers of honey many know that certain honeys produce an irritating effect in the throat, and thus aggravate the evil, whereas others have a soothing and healing power. The knowledge of the medicinal effect of honey goes no further. This uncertainty causes medical men to hesitate in prescribing it. M. Sabouret therefore gives the result of his observations and experience. From its valuable medicinal and alimentary properties he places melilot honey at the head of the list. Owing to its sweetness, colour, softness, and flavour it is superior to all other honey, from a medicinal point of view, in the treatment of throat affections, and also for outward application to bad wounds by means of ointments. As a food it is only equalled by acacia honey, which even surpasses it in quality, but is only found in abundance in very few localities in France. On the contrary, M. Sabouret says that honey derived from wild thyme, which is abundant in many localities, is the worst that can be used. This plant furnishes freely a yellow honey having an acrid taste, which irritates the throat. Its long flowering season coincides with that of the artificial pastures, so that the honey obtained from these sources has also an acrid taste, more or less pronounced in proportion to the amount of wild thyme honey mixed with it. This last is of little value, and is used in France for veterinary purposes.

M. Sabouret classifies the value of honey in the following order:—

1st Quality, Superfine: Acacia, melilot.

1st Quality, Ordinary: Sainfoin, clover, maple, fruit trees, parsnip.

2nd Quality: Natural pastures, lime, lucerne, viper's bugloss.

3rd Quality: Mustard, turnip, rape.

4th Quality: Wild thyme, ailanthus.

He also thinks that the price of honey should be regulated in accordance with its quality as stated above.

Smoke Introduction (p. 411).—This refers of course to introduction by the smoke method, and not merely to the introduction of smoke, with which some bees are unhappily only too familiar. And a nice little imbroglio A. C. Miller has raised with it! On the one hand the usual claims of priority are made, dating back to goodness knows when, and on the other the method is condemned as a failure. The claims of the first class are perhaps somewhat discounted by disuse of the practice, and the objections of the second mainly mean that the plan is not a success "in their locality," quite possibly because some detail of the plan has been modified. For, as a rule, when Arthur C. Miller says, in his emphatic way, that a thing is so, the odds are that it is. Not that it becomes so any the more by his method of stating it, but I believe he habitually tries out a scheme before giving it his sanction. Yet even Mr. Miller has not stated the true reason for the bees' failure to molest the new queen, which is that when they see her arrive in a hurricane of smoke they think that the fiend himself is upon them!

Tall Sections (p. 416).—A good deal of criticism is subjective in its origin. That is to say, a man becomes used to certain ways, and is prejudiced towards the foreign. As a user of the 5in. by 4in. section I am inclined to say a word in its favour. I will at once admit that some of Mr. Herrod's points are well taken, but nothing is perfect, not even the $4\frac{1}{4}$ section. Each style may appear to advantage in the hands of the particular and experienced user. Certainly I get some very beautiful sections with my outfit, sections which weigh a pound, and compare favourably with anything that I see elsewhere. The ease with which the plain section can be kept clean is a strong point in its favour. I concede the special appliances, but they should not seriously affect the small bee-keeper. But I think the difference in wax required is greatly exaggerated. Taking the 5 by 4 as $\frac{1}{8}$in. thinner than the $4\frac{1}{4}$, we find that there is extra wax used for the latter in comb alone sufficient to cap 18 square inches. For $\frac{1}{8}$in. of comb will just cap its own area. This supposes that cell wall and capping are the same thickness, and that the capping is flat. But the 5 by 4 section has 2 square in. more comb, say, $1\frac{3}{8}$in. thick. This demands 28 square in., which would leave a deficiency of 10 sq. in. if no foundation were provided. As a matter of fact, three sections of either pattern can be filled from the stock size of sheet, and if we assume that there is sufficient wax in the sheet to provide for all walls $\frac{3}{16}$in. deep, the account between the two exactly balances. If more than this amount is provided, up to an actual excess of wax, the tall section scores. Below this amount, down to a minimum of no foundation, the $4\frac{1}{4}$ section has it. But obviously the difference may be dis-

regarded, and in practice no handicap appears.

Making Candy (p. 419).—I note that this authoritative pamphlet gives 238degs. Fahr. as the temperature at which to withdraw the candy, and this is precisely the degree I published years ago in the "B.B.J." There is, however, an error here which requires correction, since 1¼qts. of water weigh 50ozs. not 40ozs., as stated. At least, our water does so here!

Judging Competition (p. 421).—I must own to having been astoundingly astray as to the sources of some of the samples. I certainly was the guilty one who described lime honey as peppermint. The sample was so much more minty than our own honey, which is probably always a blend, that I unhesitatingly attributed it to the peppermint beds of Surrey. Sample No. 6 would have puzzled an archangel. I must say that I fail to agree as to the merit of No. 1, which contained the "seeds of fermentation." I compared notes afterwards with the judge of the Dairy Show, who entirely agreed as to this. In my humble opinion Nos. 7 and 8, in that order, were the only samples worthy of the bench, all of which goes to show how valuable is such a competition in educating those of us who are called upon to make awards. It is very much to be hoped that the feature will be repeated.

Skeps and Disease (p. 438).—I am quite unconscious of being "adroit," unless Mr. Hamshar uses the term of one who has right on his side. I see that I did read a quotation as his own opinion, but, whilst not unreasonable in view of the general trend of the letter, this was accidental. Mr. Hamshar seems to me to have turned the whole thing topsy-turvy. It is not the "taking" of the skep which is "unnecessary," but the "salvation of a diseased stock." Quite an opposed thing, and my critic misses the effect of such "taking" upon the disease question. Disease is not automatically reduced by the taking of the heaviest stocks, but by two other factors. First, the regular renewal of comb, and second, the taking of light stocks which are unlikely to winter well. In my experience the extremes are lopped by the skeppist, who desires both honey and swarms. Swarming is, in fact, the basis of his system, and it is difficult to see how this prevents the "natural bent" of the bees, any more than it encourages inbreeding. At least, the usual frame-hivist is equally open to reproach. I think I must leave the question of profit alone. I doubt whether Mr. Hamshar has sufficiently considered the matter, or knows what the skeppist really can do.

KOOTENAY BEE-KEEPERS' ASSOCIATION, BRITISH COLUMBIA.

A well-attended and enthusiastic general meeting of the newly-formed Kootenay Bee-keepers' Association, the first bee-keepers' association to be organised in British Columbia, was held at the City Hall, Nelson, on November 27th, for the purpose of electing officers and passing a constitution and by-laws. The meeting was also a thoroughly representative one, bee-keepers from many of the outlying districts of the East and West Kootenays and Boundary, the territory covered by the Association, being present.

It has been recognised for some time that in order to stimulate the bee-keeping industry and assist bee-keepers in disposing of their honey that a system of co-operation had become absolutely necessary. Honey of uniformly good quality, and any quantity of it, being capable of being produced in this section of the Province it could not be expected that it would be possible to dispose of it at remunerative prices unless a uniform system of putting it up for market could be provided. The bee-keepers have also had considerable difficulty in the past in obtaining bee supplies, owing to heavy freight rates and other causes, and also to get hives suitable to the climatic requirements of this area. Thousands of fruit trees have been planted all over the territory during the past few years, and for this reason alone the keeping of bees has become more essential. It is hoped therefore that the Association will be able to accomplish useful work. That the movement is appreciated can be gauged by the fact that nearly half the bee-keepers in the territory have already become members and paid the annual subscription of $1.00.

The objects of the Association as set forth in the Constitution and by-laws adopted at the meeting are as follows:—

"The objects of the Association shall be to promote and encourage the keeping of bees and the most suitable methods for their profitable management.

"To assist members of the Association in disposing of their produce to the best advantage by the adoption of uniformity in its 'get up' for market, and the provision of a special distinctive honey label, for the use of members only, which should ultimately tend to be looked upon by the purchaser as a guarantee of excellence and purity.

"To obtain the most advantageous terms for members in the purchase of bee supplies.

"To promote and regulate local exhibitions of honey and other bee products, and arrange for the competent judging thereof.

"To advocate the more general growing and cultivation of nectar-yielding trees and plants, such as Linden or Basswood (*Tilia Americana*), Alsike Clover (*Trifolium hybridum*), &c.

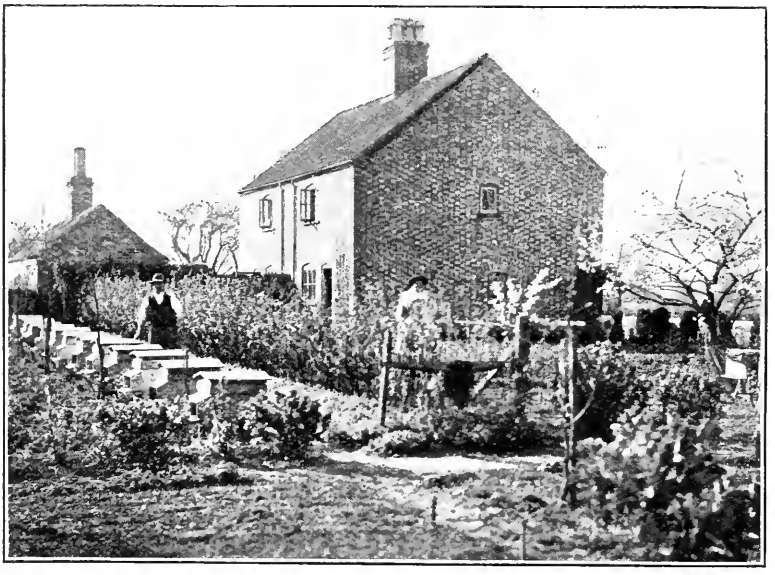
"To aid in the dissemination of reliable and practical information with regard to the bee-keeping industry, and further its progress in every way possible in the interests of the members."

The following officers were unanimously elected for the year ending September 30th, 1915:—

President, G. Fleming, Nelson; Vice-Presidents, James Johnstone, Nelson, and Major-General Lord Aylmer, Queen's Bay; Honorary Secretary-Treasurer, W. J. Sheppard, Nelson; Executive Committee, J. J. Campbell, Willow Point, Mrs. Casler, Nelson, J. Hyslop, Nelson, C. G. Johnson, Nelson, W. H. Rixen, Nelson, W. J. Mohr, Nelson, J. Blinco, Creston, B. Lockwood, Fruitvale, E. Alpaugh, Kaslo, R. E. Plewman, Rossland, J. H. Vestrup, Nakusp, H. W. Collins, Grand Forks, H. G. Slater, Robson, T. S. Gill, Cranbrook, G. F. Attree, Queen's Bay; Auditor, J. D. Kerr, Longbeach.—W. J. SHEPPARD.

"I am sending you photo of part of my apiary that I had taken a few days ago. I have fifteen stocks, all healthy at present. I have been a bee-keeper a number of years, but I only started on the up-to-date principle five years ago. Since I visited Mr. Frusher, at Crowland, who has been of great assistance to me, I have made all my own hives after his pattern, and have not been troubled with bee disease of any kind up to the present. My best year was in 1911, when I took close upon 7cwt. of honey from seven hives. In 1912 there was none; 1913 was fairly good, and the best quality honey I have ever had.

"I have taken the BRITISH BEE JOURNAL since 1911, and find it very useful. I have kept all back numbers, so I can refer to them at any time."



APIARY OF MR. W. HOLLAND, SWANINGTON.

HOMES OF THE HONEY BEE.

APIARIES OF OUR READERS.

We have pleasure in presenting this week a picture of the apiary of Mr. W. Holland, at Swanington, near Norwich. Referring to his bees, he says:—

PRESS CUTTING.

INFLUENCE OF FEAR ON BEES.

The Secretary of the South Staffordshire Bee-keepers' Association referred in a recent lecture to the need of the possession of perfect confidence in dealing with bees. Little children quite devoid of fear, he said, might attend to the hive without any danger of being stung, but bees took great advantage of timid and nervous people.

This well-known fact has a most interesting bearing on modern psychology. All creatures armed with natural weapons—stings, for example—are known to use them mainly for purposes of defence. Fear is the predominant feeling which forces animals into action, and fear, as

we know, is peculiarly infectious. Thus a person suffering from fear sets up definite vibrations which are at once communicated to the bees, and they, in turn, suffer a sense of danger which prompts them to resistance. So an accomplished bee-master will set up with perfect confidence vibrations of a calm and soothing character alone, with the result that he may handle the bees in absolute security.

The extraordinary influence of fear vibrations is seen in the case of a frightened mouse, which has been known to create panic in a herd of elephants. Ladies and others of sensitive temperament will often confess to a sense of wild and unreasoning terror in the presence of a mouse—the reflex action of the fear in the mouse itself.—From the *Yorkshire Post*.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

THE ROYAL SHOW FUND.

[9105].—May I be allowed to express a hope that all bee-keepers, especially those who have gained prizes at shows, will put down their names (a few have already done so) as subscribers to the above fund, which is well deserving of support by all lovers of bees?

The learned "Maeterlinck" says of our bees: "To him who has known them, and loved them, a summer where there are no bees becomes as sad and empty as one without flowers or birds."

I will only add that the British Bee-keepers' Association, unrepresented at the Royal Show for 1915, would become "sad and empty," not only for one summer, but for many to come. We shall, no doubt, "bee" represented, but more money is required to make the honey department a success; therefore let us all rally round our venerable Chairman, Mr. Thos. Wm. Cowan, F.L.S., F.G.S., &c., of world-wide fame, and our able and excellent Secretary, Mr. W. Herrod-Hempsall, F.E.S., and send in long lists of subscriptions. Wishing all bee-keepers a Happy and Prosperous New Year, and a bountiful nectar flow for 1915. F. S. F. JANNINGS.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

J. W. F. (Edinburgh).—For particulars of hives and appliances you had better get a copy of "The British Bee-Keepers' Guide Book," which you will find listed on page ii. You will find an article on Bee-keeping in Kashmir in our issues for Dec. 18th and 25th, 1913, which we can supply for 4d.

C. N. (Oswestry).—It will be advisable to put in new sheets of foundation.

RIP VAN WINKLE.—(1) and (2) The secretary of the Glamorgan B.K.A. is Mr. W. J. Wiltshire, Maindy School, Cardiff, who will be better able to give you an answer to query No. 3 than we are. (4) No. (5) We believe the business is still being carried on. In future please give name and address as per rule at the head of this column.

Suspected Disease.

J. P. PHILLIPS (Wilts.), "6060G." (Galashiels), "QUERICUS" (Birmingham), "APIS MELLIFIEA" (Bristol).—The bees sent are affected with "Isle of Wight" disease.

MISS E. M. K. (Dorset).—The bees are affected with "Isle of Wight" disease. The best thing is to destroy them.

F. SANGER (Cirencester).—Yes, it is "Isle of Wight" disease. You can do very little more for your own bees than you have done. You might medicate the candy or syrup with quinine or one of the other advertised remedies.

P. R. G. (Teesdale).—The bees sent show symptoms of "Isle of Wight" disease. Yes, kill the bees with cyanide of potash, and burn everything *except* the hive, which may be disinfected by scorching with a painter's blow lamp. Do not give syrup during the winter, you might give a cake of medicated candy. You can do nothing further now.

A. M. T. (Cheshire).—No. 2 are affected with "Isle of Wight" disease, and Nos. 1 and 3 show symptoms of the same disease.

NOTICE.

Owing to the dislike of one of my ancestors to a long signature he dropped a portion of his name. For several generations this caused no inconvenience, as they did very little business. Owing to the continued increase in my business interests, the dual situation of one signature for ordinary use and another for legal matters has become impossible; therefore, on and after January 1st, 1915, I shall assume my full name of W. Herrod-Hempsall. I shall be grateful if all correspondents will kindly note this and address me, also make out all cheques or documents and insert in any list my name, as above.

W. HERROD-HEMPSALL,

hitherto commonly known as W. Herrod.

ST. ALBANS AND DISTRICT B.K.A.

This comparatively young but progressive Association has brought another successful year's work to a close. The Association relies largely for its popularity on a carefully arranged series of lectures which are given month by month in the County Museum, St. Albans, and much has been done in this direction to foster better methods and a more intelligent interest in bee-keeping.

Recently members and their friends attended in large numbers to hear Mr. Councillor E. Watson lecture on "The Bee," which he illustrated by an exceptionally fine collection of micro-photographic slides probably unique in their character. These slides, it is pleasing to record, were the work of the lecturer, who has devoted considerable time to the study of this hitherto little explored field of observation.

NECTAR-PRODUCING PLANTS AND THEIR POLLEN.

By George Hayes, Beeston, Notts.

IVY (*Hedera Helix, arborescens,* &c.).

No. 34. NAT. ORD. ARALIACEÆ.

The ivy in this country extends over the whole of Britain. It will establish itself in a place quite independent of the nature of the soil, position, shelter, or shade. It appears equally at home in the back yards of the slums or the parks of the city, the open gardens of the country cottages or in shady woods and copses, in damp hedgerows, on dry rocks or sides of buildings. In all these places we find it creeping, clinging, massing, covering, as necessity requires. In the latter case we find it sometimes hiding unsightly objects, its close foliage transposing them into things of permanent beauty. It is also very tenacious of life; a sprig broken off and thrown away will, more often than not, take root and grow.

In climbing up the perpendicular sides of a building or up a tree it clings by means of small rootlike excrescences, which shoot out all along its stems and branches, and lay hold of any small fissures or roughness, which they enter and fill up, and in this way get a hold which enables the ivy to keep firm and erect. On a building I consider it harmful, for not only does it hide the architecture—which in many ancient edifices is too beautiful to be concealed—but it often does great damage if a shoot is able to get between the joints of brick or stone walls, for in course of time it will gradually displace them, and send them tottering to the ground. Also on trees it is often disadvantageous, for not only does it cling by the rootlike excrescences, but the branches or runners will twine round the tree, their grip will be tightened year by year, and in course of time the tree becomes strangled and eventually dies, leaving the ivy in undisputed possession.

Although the ivy is only a creeper, the main stem, or trunk, will sometimes be found quite a foot thick. The wood is very soft and porous. The leaves are ovate, angular, or three- to five-lobed, although other forms are found in the many species and varieties which exist. They are thick, leathery, and with a glossy surface, in some varieties beautifully veined, or decorated in the variegated sports. The flowering branches, projecting a foot or two from the climbing stems, bear a short raceme of nearly spherical umbels of a dull pale green colour, the petals being five in number, short, and very reflexed. The stamens are a brighter greenish-yellow, which somewhat enlivens the otherwise dull corolla.

The plant is an evergreen, and flowers from October to December. The fruit is a purplish-black berry, which does not ripen until spring, when it affords grateful food for the birds.

The ivy is an acknowledged good source of both nectar and pollen, and is greatly appreciated by the bees, who often continue their breeding late into the winter if ivy blossoms are available by open weather, as is the case this season. To-

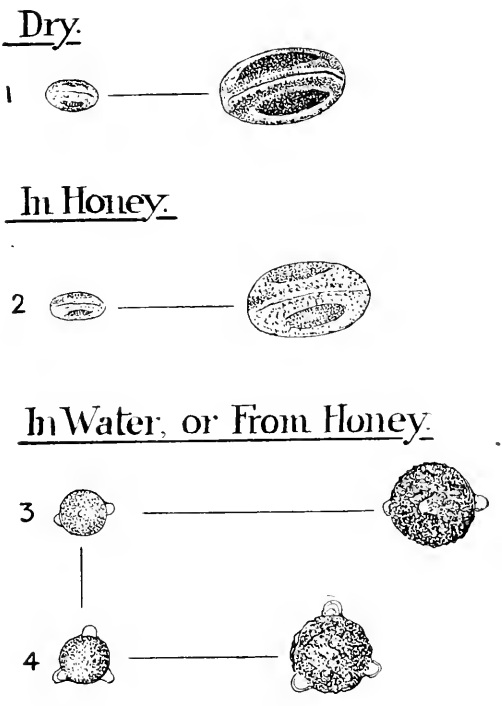
day (November 10th) the bees are coming home frequently well-laden with both honey and pollen. It is only the old established plants, which have been allowed free scope, that flower, for where a plant is trimmed to keep it within bounds it has no chance of doing this. An old plant which has been left for the last twenty years or more to grow over a wall or archway, or on a tree, has a profusion of flowers during October and November; and when the sun is shining on it we find a host of visitors seeking the food it offers, for not only do we find our hive bees there, but many other Hymenoptera, and also Diptera, or two-winged flies.

The pollen is a light, although not over-bright yellow, somewhat dry, and takes rather more packing in the corbiculæ of the bees than does pollen of a more sticky nature. When it is so packed in mass it is in colour a good yellow ochre; but, of course, very much lighter in shade under the microscope, both by reflected and transmitted light.

When dry, and you are able to get it at the best angle for observation, it appears as in No. 1 and its enlargement, and measures—if the grains are full grown—about $\frac{1\frac{1}{2}}{1000}$ in. × $\frac{1}{1000}$ in. When pollen is yielded profusely, as in this case, we always get a large proportion of immature grains, which are not so large, and take on a slightly different form because they have not reached maturity.

In honey it does not appear to alter its form, but becomes more transparent, as indicated in No. 2.

When placed in water or taken from honey it will be found to have assumed the forms shown at Nos. 3 and 4, the former being what may be considered a side view and the latter a top view. It will also be noticed that the pimples seen in Nos. 1 and 2 have developed into a rough, irregular surface, with three processes dispersed equi-distant round the sphere. It now measures full $\frac{1\frac{1}{2}}{1000}$ in. diameter.



POLLEN OF IVY.

ROYAL SHOW FUND.

	£	s.	d.
Donations already received ...	22	6	6
Dr. Loane		10	6
J. Berry		5	0
A. H. Bowen, by sale of *Limnanthes Douglasii*		1	0

WAR RELIEF FUNDS

Donations already received, £3 6s.; Mr. Morris Owen, 28lb. tin of heather honey.

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

Procuring Surplus.

(Continued from page 446, vol. xlii.)

It is more difficult to fit up sections than shallow frames, as they are very fragile. Unless care is taken in folding many will be broken. In dry weather it is necessary to damp them to avoid this. One of two methods can be adopted—they can be packed edgewise on the table or floor in a single layer with a damp cloth kept over them for a few days before required. If wanted at once, then use hot water in a cup and a brush, take as many sections as can be held comfortably in the hand, put them straight so that the V joint is at the bottom; the brush is then dipped in the water and drawn over each V joint at the top, the section is then dropped and the next one treated in the same manner (Fig. 34); in this way, with a little practice, the work is done very rapidly. On no account must the inside of the

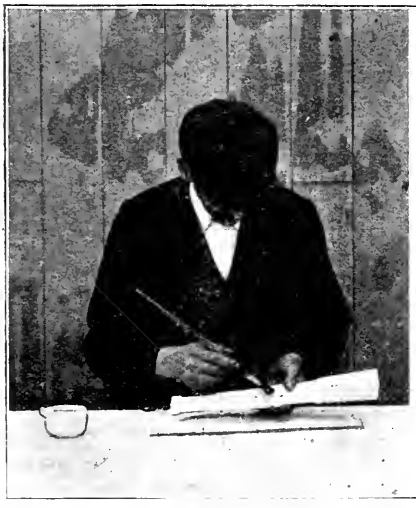


Fig. 34.

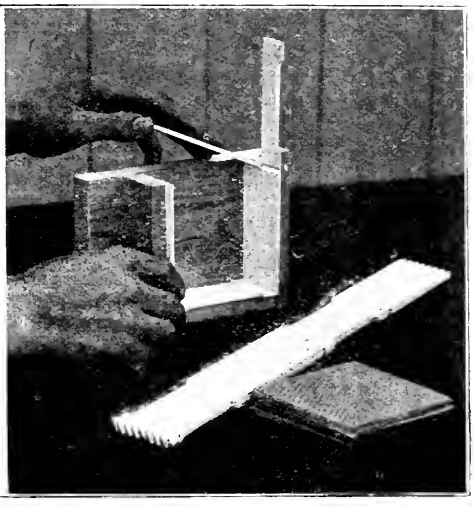


Fig. 35.

V joint be damped or the wood will swell and it will be impossible to fold the section square. Hot water is used, as it soaks in quicker than cold. The sections are now folded, leaving one half of the split top standing upright, taking care that it is the half that will shut down properly, as the saw-cut is made on the bevel,

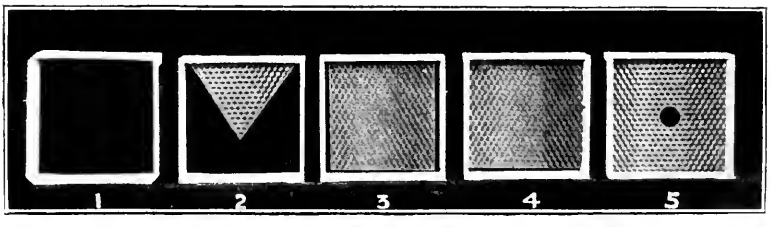


Fig. 36.

so that when the two portions come together the foundation is gripped firmly and does not slip out, which it might do with a straight cut. A simple block (Fig. 35)

can be used. Care should also be taken to fold them with the cut out V portions inside and not outside as No. 1 (Fig. 36), a mistake often made and many sections wasted thereby.

The next operation is to fix the foundation. For this purpose at least a split top section should be used, if the foundation is stuck to a plain top by heating the edge in hot water or in the flame of a candle and then pressing it down on the wood it often falls down; if heated in the flame of a candle a smoky edge is left, which shows a black streak when the section is cut out for table use, giving an objectionable appearance. The foundation should be

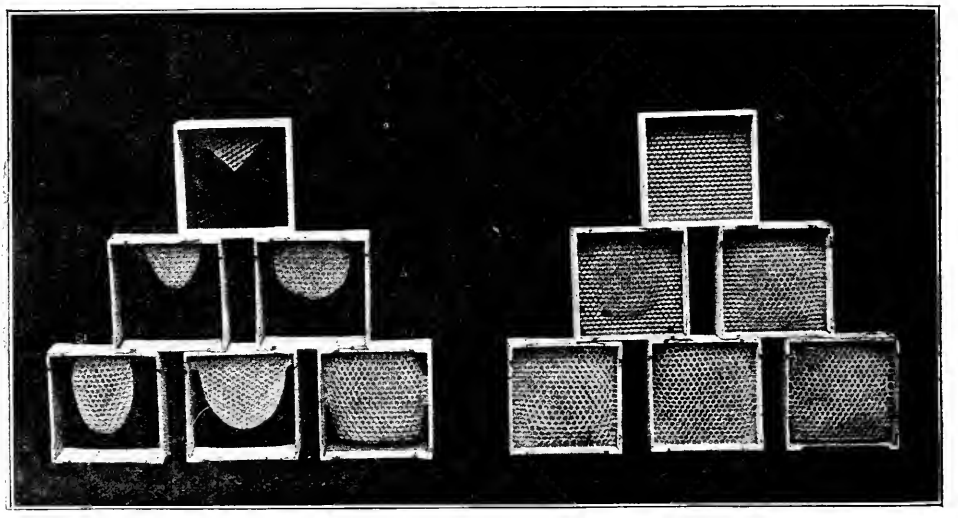


FIG. 37.

very thin so that the mid-rib will not be of a greater thickness than in natural comb, if stout foundation is used the thick mid-rib is objected to by the consumer. Full sheets should be used, as by this means better sections are obtained than by starters; the comb is also attached to all four sides of the wood instead of only on three, which is often the case with the latter. The methods of using foundation are shown in (Fig. 36); No. 2, a starter; No. 3, a full sheet in a plain split top without groove; No. 4, a full sheet in a groove and split section.

The superiority of the combs worked from full sheets over those with starters is illustrated in (Fig. 37); on the left hand the progressive stages of the work to its completion from a starter are shown, and on the right those from a full sheet.

(*To be continued.*)

THE NYASSA BEE.

(*Continued from page* 228, *vol. xlii.*)

Last rainy season (December, 1913, to April, 1914) my little friends here were given no chance. The unoccupied plots of the township were allowed to remain covered with high grass, and the little weeds that otherwise flower and give a delicious honey could not thrive. Thus the harvest in June was *nil*. That induced me to establish another small out-apiary, 7½ miles from here on the lake shore. I enclose photographs of the hut on the verandah of which hives are placed.

They have rewarded me with a lot of very fine sections of white tree honey of excellent flavour and light colour, much better than the tree honey that is got here during the same time, where the principal bee plant then is the Chamwamba. At the out-apiary on the lake shore the principal bee plants have been so far:

Manihot	Native root crop.	August, September.
Mpekesu	Thorny tree with edible fruit.	September very melliferous.
Mtondo	Large tree used for nat. mortars and canoes. Yellow flowers.	September.
Mkuyu	Tree with many small flowers.	September.

I keep one fierce stock of bees at each out-apiary in order to keep off children,

&c. I harvest their honey shortly before the end of the honey-flow. One or two days before I harvest I exchange the place of the fierce stock with another smaller and more docile stock. Thus the fierce stock loses most of the old and vicious bees and becomes easy to handle. Many will have done this before me, but I have not seen it recorded, and it saves the bee-keeper from many stings, and many a good stock that gives much honey can be saved from destruction by its owner by this method.

My bees confirmed the Editor's verdict on my smooth foundation, by refusing to draw out a number of sections mounted with it, when they drew out all other sections round them, these having been made with the Rietsche foundation mould.

combs were empty and much mutilated in a way quite new to me. On the floor-board in the droppings of the wax-moth I found two large beetles, apparently male and female of one species, related to the Rhinoceros beetles of Europe. The mutilated combs were partly eaten away altogether, partly only on one side until one-eighth of an inch from the septum, and in some places through the septum as well, so as to look like a net. I enclose a photograph of the beetles with the damaged comb, a foot rule in the middle to show the size.

Of course, the beetles may have been there only by accident, or only to eat the dropping (excrement) of the wax-moth. But how did these couple of beetles get together, and how is it that the combs

OUT-APIARY AT FORT JOHNSTON, ON THE SHORE OF THE NYASSA.

I cannot speak too highly of the latter. Only for sections the foundation it gives is somewhat thick. I had recommended the smooth foundation as a makeshift, when proper foundation cannot be got at a reasonable price, in preference to ordinary starters.

I have discovered a new enemy of the bees, or perhaps I am rash in calling him an enemy, as he may have been an accidental inmate of a hive only. One of the hives would not prosper and showed signs of wax-moth. Queen-right stocks here get rid of these without human aid. After waiting three weeks I inspected the hive and found at the back one comb with pollen and honey, then next to it combs with brood, then one empty, then four with much felt of wax-moth and larvæ of same and cocoons. The remaining four were damaged in such a strange way if the beetles have not eaten them?

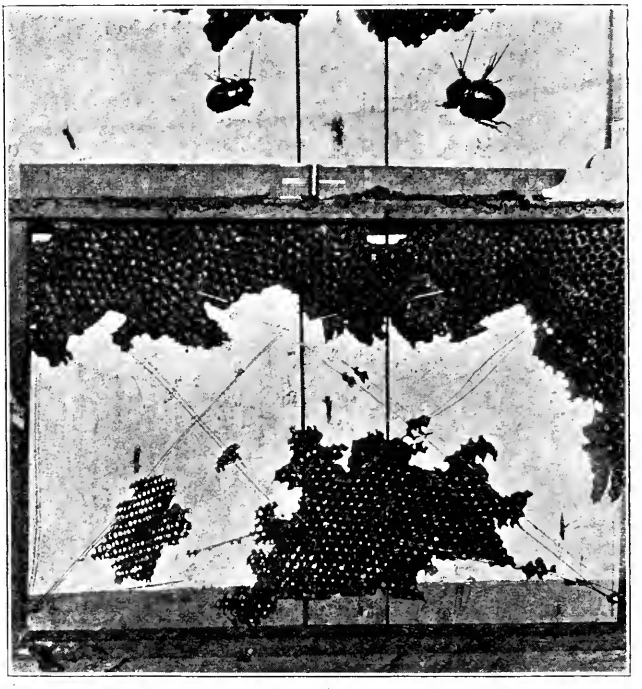
Not exactly an enemy to the bees, but certainly a great nuisance to their keeper in the out-apiaries are the White Ants. They attack the hives, like all other woodwork almost, notwithstanding careful painting. Once they get through the paint they eat the wood underneath it until the hive gets quite weak and some day may crumble up in the hands of its owner when he tries to lift it. I have not found any satisfactory remedy yet that would not require frequent attention and thus be suitable for an out-apiary.

My attempt to find a substitute for excluder zinc in slightly broader top bars with tacks at alternate ends protruding just the right length to make the space between the bars exactly the same width

as the perforations in a queen excluder, in several cases has been successful. Failures were due either to not pushing the frames close enough together, which is my own fault, or by the tintacks that were used entering the wood too much when pressed together hard. This latter can only be avoided by having hobnails instead of the tacks, the hobnails having flat tops and the tops having just the height of the slot in an excluder. In Europe it should be easy to find these, and then the arrangement, to my mind, will be as near perfection as can be, and preferable to the excluder zinc for various and obvious reasons. I think dealers in bee appliances should stock such hobnails.

I am much pleased with the reduced distance of my frames—1-5/16th inches instead of the usual. It seems to keep down drone rearing and indirectly swarming. Twice the bees have altered the foundation in a section into drone cells and the queen laid in them.

L. W. J. Deuss.



TWO BEETLES OF THE FAMILY DYNASTIDÆ, MALE AND FEMALE, FOUND IN A HIVE, AND CURIOUSLY MUTILATED COMB ATTRIBUTED TO THEM.

NOTES FROM ALLAN VALE.

Wasps and Bees.—Few people seem to know the different species of wasps, of which we have six. All these are of the social class. I do not include the hornet. The wasps that are injurious to bees are the ground wasps, or those that build their nests in the disused burrow of some animal such as the mouse or mole. Of this species there are two in Scotland, the third is common in the South of England, but I do not remember its ever being a trouble to the bees; it is named *Vespa rufa*. The two ground wasps which we have in Scotland both attack the bees; one is called *Vespa vulgaris* and the other *Vespa Germanica*. But we have also two others. One of these builds its nest in trees; a very harmless wasp in every way as far as I am acquainted with it, and named *Vespa Britannica*. The other variety is very fond of building its nest in bee-hives. For two years I have found a nest in the roof of one of my hives. This wasp is so gentle that it will go on building its nest whilst you are holding the lid of the bee-hive in your hands. Its name is *Vespa sylvestris*, and probably if a wasps' nest is found in a bee-hive is will be one of this species, and if so it is perfectly harmless to the bees. It seems to live chiefly on honey, which it collects from various flowers, and it is a curious sight to see this wasp with bees and flies collected on one of the large heads of the Giant Hemlock. The flies and bees take no

notice of it, but the moment one of the ground wasps appears on the scene there is a general stampede of the flies; they seem to know by the very buzz that an enemy has arrived amongst them. I have ventured my head in close enough proximity to a wasps' nest to observe that as they emerged from a hole they did not pass their two forelegs over their antennæ in the way that a bee does on emerging into the light from the entrance to its hive. I do not think sufficient attention has ever been paid to this habit of bees. If they are closely watched it will be seen that every bee passes its two forelegs over its antennæ before taking flight. When I drew attention to this habit formerly, someone suggested that they were cleaning their antennæ, but it would be a strange thing if bees were always to clean their antennæ in exactly the same way and just at the same time, that is, just before taking flight. I have before expressed my own thoughts on the subject, and will not repeat them, but would like to get others to investigate the matter.

Queen-rearing Stations.—It would be difficult in this country to find a place sufficiently removed from the neighbourhood of bees to carry out a special selection. It struck me this summer, when staying on the coast of Ayrshire, that Ailsa Craig might be utilised for this purpose. Of course the bees would only be kept there during the breeding season. The island is sufficiently far from the nearest mainland to ensure no drones reaching it from there.

"Isle of Wight" Disease.—A bee-keeper with whom I was staying this year had "Isle of Wight" disease very pronouncedly among his bees. He told me that I had drawn his attention to it some three years ago, when visiting him; they were then crawling about in the usual fashion at the entrance to the hive. His bees seem, however, to have recovered, and I saw no trace of the disease amongst them this summer. He told me himself he did not believe in the theory that they never recover from the disease. After all the investigation, how much there is of mystery connected with this complaint. Is it that the microbe causes the disease, or is it that the disease originates from quite a different cause, and the microbe, which is always present more or less, under certain circumstances develops to a dangerous extent? Is it possible that the condition under which this takes place is produced in the bee by a parasite which has escaped observation? My reason for suggesting this is that many years ago, when living in Hampshire, I observed that on the disturbance of an ants' nest—that is, of the small black ant—advantage was taken of their excited condition as they ran hither and thither by an exceedingly minute ichneumon fly. This fly was much smaller than the ant that it attacked; it hovered over them in the air, from time to time darting down and evidently laying its egg under the segments of the abdomen. May it not be so with bees that they are attacked by an enemy of this description, and that then, when in a weakened condition, they fall a prey to a microbe?

I am thankful to say that my bees have escaped the "Isle of Wight" disease up to the present time, apparently, although many stocks have died within half a mile from me. One bee-keeper told me that almost all his stocks are dead or dying, with the exception of a nucleus hive that I gave him. Can I have got the immune strain? I am thankful to say that after three years of severe dysentery amongst my bees, which in some cases threatened to destroy the whole hive, I seem this autumn to be clear of the pest.

Varieties of Bees in the same Hive.—I am inclined to believe that this arises from queens mating more than once. The last time I was experimenting with my baby nucleus hive I unfortunately killed the queen, not noticing that she was fixed in the piece of queen-excluder, that I kept over the entrance, during the time I was unable to keep her under observation; she was evidently trying to escape for a second flight, as I have found on a previous occasion.

Is the bee indigenous to this country, or was it brought over by the monks in very early times? Or, on the other hand, did it come on its own account, possibly blown across the British Channel by a strong wind? I have seen butterflies far out at sea, and I remember some years ago coming across a swarm of bees that had apparently alighted in a very exhausted condition upon the seashore. They were gathered in little knots upon the stones over a considerable area. They had apparently come from the land opposite, which would be some five to ten miles away.

Has the last word been said on this subject? I was for long incredulous, till I convinced myself of the truth by experimenting with wasps. With bees there is no time of the year that you can be certain of no drones being about. In one of my hives that was very strong I saw drones on the 10th of October last year. With wasps it is different, there are no male wasps about till the autumn. The question seems to me to be this: Of what advantage is parthenogenesis to the honey bee? Under what circumstances can any advantage arise from it, or is it that under no condition is the remarkable power possessed by this insect of any prac-

tical service to the welfare of the species? It seems to me that to answer this question we should be able to examine bees in a climate more congenial to their nature than our own, that is, in a country where they are undoubtedly indigenous. A careful study of the various species of bees in their native lands might throw more light on this most interesting subject.

Speaking of the variety of bees, I have heard it said, and seen it written, that the cross-breeds of those varieties are exceedingly vicious, and this I have experienced to my own discomfiture, but I have never heard any explanation, which was to my mind at all satisfactory, given for this viciousness. The mule is sometimes cited as being a vicious animal; this, I doubt not, is so, but how does this affect the bee? The horse and the ass are distinct species, not so with bees. Those that are commonly imported from abroad are only a variety, and will cross-breed to any extent with other varieties. Not so with a mule, it is sterile, so that it seems to me it should not enter into the question and throws no light on the subject, which seems veiled in much obscurity. I have found Mr. Sladen's Golden bee very gentle and manageable in every way, so also Ligurians, but, alas! that I ever introduced them into my apiary, for their descendants turned out the most ferocious Amazons. Why should these beautiful and gentle bees crossed with our own well-behaved, sober-coated brown bee produce such results?—HUMBLE BEE.

WEATHER REPORT FOR THE YEAR 1914.

WESTBOURNE, SUSSEX.

Rainfall, 38·47 in.
Above average, 8·44 in.
Heaviest fall, 2·21 on December 9th.
Rain fell on 186 days (above average, 7)
Sunshine, 1818·8 hrs.
Above average, 8·4 hours.
Brightest day, June 15th, 14·3hrs.
Sunless days, 54 (below average, 7).
Maximum temperature, 82 on July 1st and 11th.
Minimum temperature, 20 on Jan. 24th.
Minimum on grass, 11 on Jan. 12th.
Frosty nights, 60 (below average,12).
Mean temperature, 49·9.
Above average, 1·3.
Maximum barometer, 30·576 on Jan. 1st.
Minimum barometer, 20·603 on Mar. 28th.

L. B. BIRKETT.

WEATHER REPORT.

WESTBOURNE, SUSSEX.

December, 1914.

Rainfall, 9.71in.
Above aver., 6.54in.
Heaviest fall, 2.21 on 9th.
Rain fell on 25 days.
Sunshine, 33.5 hrs.
Below aver., 20.3 hrs.
Brightest day, 24th, 4 hrs.
Sunless days, 11.
Maximum temperature, 54 on 6th.
Minimum temperature, 26 on 6th.
Minimum on grass, 20 on 6th, 25th, and 30th.
Frosty nights, 13.
Mean maximum,47.0.
Mean minimum,36.6.
Mean temperature, 41.8.
Above average, 1.7.
Maximum barometer, 30.253 on 25th.
Minimum barometer, 28.810 on 14th.

L. B. BIRKETT.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

AN INVITATION TO SOLDIER BEE-KEEPERS.

[9106] It has occurred to me that possibly there are bee-keepers and readers of the "B.B.J." amongst the New Army now in training, and if there are any such at Witley Camp (which will presently have about 22,000 men there) I should be very glad to hear from them, when I should be pleased to see them, and have a bee talk over a cup of tea here, as I am only 2½ miles from the camp.

I should be very glad if you could insert this in the "B.B.J." so it may catch everyone's eye.—J. BOWDEN, Broomhill, Witley, Surrey.

A FIVE-EIGHTHS MINIMUM HIVE.

[9107.]—Curiously, soon after writing on the minimum hive I got confirmation of the thought that a square hive would be the best. In *Gleanings* of November 1st Charles A. Brown says that if you

turn the upper storey of a hive so that the combs run at right angles to those below, the bees work from the outer combs to the centre, and that the stock will not swarm while there are empty combs over the middle brood combs. I should think, too, that they would be less likely when the upper combs are across the lower ones to build brace combs. While I was making minimum hives a friend told me that the warmest dwelling-house wall has been found to be one or two boards nailed together with some thicknesses of paper between. So I have made some of my hives with ends of a double thickness of five-eighths wood and four sheets of *Times* paper between. This gives the right ledge for the frames to rest on, but of course needs a containing strip on the outside. Thus the chamber has a convenient grip to handle it by. Another strip bevelled on the upper edge increases the foot of the wall to the same thickness as the top of the next body below. This construction of the wall enables us to use up short scraps of wood now and then, and, indeed, if the grain of the outer and inner wood is at right angles, the wall will not warp and the ends are better to nail to. This hive takes far less time to make than one with an air-space—about as long as a W.B.C. body box.—G. G. Desmond, Sheepscombe, Stroud, Gloucestershire.

EXPERIENCES.

[9108.]—I was interested in Mr. A. H. Hamshar's article of December 17th, where he mentioned medicating the syrup with a view to curing "Isle of Wight" disease. I wonder if any brother bee-keeper has tried Cattle salts (coarse Epsom salts)? I have used them for two years in the syrup and candy. One handful to every 14lbs. of sugar. I find what is good for man and beast is good for bees; they take it well and it keeps them fit—no sign whatever of dysentery from it.—Lincolnshire.

NEW ZEALAND BOX HIVES AND STRAW SKEPS BARRED.

[9109.]—Notwithstanding the apparent irreconcilability of my friend Mr. Crawshaw's opinion and my own on certain matters, I think it is quite possible we may be in harmony on one point suggested at the close of Mr. C.'s communication (page 334, August 27th). In favourably commenting upon the result of a request from the bee-keepers of New South Wales, laid before their Minister of Agriculture by a deputation (a report of which was published in your issue of July 23rd last) for legislation to protect their industry, my friend queries: "I wonder why it is so easy to obtain a satisfactory hearing in the Colonies and so difficult at home? Is there some subtle difference in the atmosphere, or is it merely that the type of man who emigrates adopts more readily a wider horizon?"

I feel certain that the true explanation of the whole matter is to be found in an affirmative reply to the last query. It is well known that Britishers are very conservative and like to stick to their old customs and institutions, often after they have become effete. The type of man who leaves his homeland to take all the risk of colonising a new and distant one must, as a matter of course, be self-reliant. He is the type of man who does not, as a rule, care a fig for old customs, he has to rough it, and he naturally adopts the best methods he can devise or follow, whether originating in his own or any other country, whatever be his calling. Our economic horizon is not bounded by the country we live in, but extends to the farthest limits we can reach, and our rulers being of the same type are in sympathy with all our reasonable demands. However conservative a person may be when first coming to the Colonies, if he is going to make any headway his conservative ideas soon leave him. The few who cannot conform to the new conditions (they are usually over middle age when they come) return, if possible, and decry the Colonies, when really the fault or misfortune is in their own make-up.

May not the backwardness of British bee-keeping, so far as legislation is concerned, be due to the need of a wider outlook and more determined efforts on the part of the majority of your bee-keepers to get the assistance so readily accorded by legislators in other countries?—I. Hopkins, Auckland, N.Z.

A NOTE FROM ABERDEENSHIRE.

[9110.]—As a reader of your Bee Journal I thought it might be of interest to some of your readers to know how we bee-keepers get on here. Last year we had a record year, it being very warm, and the heather was a very good crop. We think 70lbs. to 80lbs. a very good take from one hive. I see by your journal that it was a non-swarming year in England. We had a great swarming year, but we are much behind England, as we think if we get a swarm in the middle of June it is very early. I have been looking at my bees to-day, the 7th

January, and found what I thought a very strange thing. The hive being an old-fashioned "ruskie," I lifted it up a little, and found a great lot of dead bees on the board; I should think about 1lb. Thinking they were all dead I took off the covering, and was surprised to find plenty of bees—the combs all covered—and a great quantity of young brood ready to come out of the cells. Do you think this an uncommon thing at this time of the year? All the other stocks are very good, and have plenty of food. A friend gives me your journal every week, and I don't think there is a line I do not read. I am a great lover of bees, though I can't say that I know a lot about them, but I always learn something out of your paper, and I wish it every success. WILLIAM MACDONALD.

[It is very early to have so much brood, especially so far North.—EDS.]

THE WEIGHT OF A GALLON OF WATER.

[9111.]—Referring to your correspondent's criticism, page 4, "B.B.J."——"Cappings of Comb"—Making candy (419).—He does not seem to be aware that the English gallon is not a standard all the world over. The American gallon of water weighs 8lbs., therefore $1\frac{1}{4}$ quarts weigh 40oz., and the bulletin is correct. — CHAS. ELWEN, M.P.U.C., M.R.U.S.E.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

[8990.]—*Transferring Bees from Skep.* – I have bought a skep of bees which were hived the last week in April, 1914. Instead of driving them into another hive would it be advisable to fix up the new hive with frames fitted with full sheets of foundation and then set the skep on the top of them about March, when weather permits, at the same time feed the bees; after a few weeks put the queen excluder on the top of the frames till the brood is all out in the skep, then take the skep away and put shallow frames on in its place? Can I do this without danger of losing the bees?—A. W. BOAKES.

REPLY.—Yes, this is the best method of transferring; there is no danger of losing the bees. Do not put the skep on the frames so early as March; the middle of April will be early enough. The safest plan is to fix the skep on the frames as soon as it begins to be crowded with bees. When the queen has taken possession of the bottom combs, and is laying freely in them, put a queen excluder between the hives, only *make certain that the queen is below the excluder.* You may remove the skep about 24 days afterwards.

[8991.]—*Using Honey from Diseased Stocks.*—My bees having died with "Isle of Wight" disease I beg to enquire if the honey still in the hive would be good for consumption?—A. E. ELKINS.

REPLY.—Yes. The honey is quite good for human consumption. It is only injurious to bees.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

Suspected Disease.

ANXIOUS (Edmonton).—The bees are suffering from "Isle of Wight" disease. (1) No, your best plan is to burn them; (2) The only safe plan is to melt them down. Lime and dig the ground where the hives have stood and a little distance round. Medicate the food given to the healthy stock.

BEGINNER (Goodleigh).—The bees sent are affected with "Isle of Wight" disease.

HONEY IMPORTS.

A reference to the total value of imports of honey into the United Kingdom for the year 1914 shows a considerable falling off compared with 1913. In the latter year the total value was £50,673, so that during 1914 the imports of honey fell in value £13,011. This should be good for the British bee-keeper. The whole of that amount cannot be due to the war, for comparing the months in the two years we find that in February, March, April, May, and December last year the imports were higher than in the corresponding months of 1913. As might be expected, the greatest fall in 1914 was during the months of August and September, amounting in August to £4,752, and in September to £5,978, but even in January, June, and July the fall was considerable. We trust that the foreign honey has been ousted by the home produced article, and the money has found its way into the pocket of the British bee-keeper, and will continue so to do.

NOTICE.

Owing to the dislike of one of my ancestors to a long signature he dropped a portion of his name. For several generations this caused no inconvenience, as they did very little business. Owing to the continued increase in my business interests, the dual situation of one signature for ordinary use and another for legal matters has become impossible; therefore, on and after January 1st, 1915, I shall assume my full name of W. Herrod-Hempsall. I shall be grateful if all correspondents will kindly note this and address me, also make out all cheques or documents and insert in any list my name, as above.

W. Herrod-Hempsall,
hitherto commonly known as W. Herrod.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of December, 1914, was £3,024. From a return furnished to the British Bee Journal by the Statistical Office, H.M. Customs.

TOTAL HONEY IMPORTS FOR 1914.

	£
January	1,209
February	2,273
March	2,465
April	4,747
May	5,416
June	4,902
July	5,307
August	1,923
September	533
October	3,930
November	1,873
December	3,024
	£37,662

By Nemo.

War, and the Shortage of Wax in Russia.—G. Kojevnikoff, writing on this subject in *Pchelovodnaya Shisn*, says that at first sight it would appear that there was little connection between a formidable war and peaceful bee-keeping, but it is evident that in this Slavo-German war the connection is very marked. It is well known that notwithstanding the extent of bee-keeping in Russia the production of beeswax falls far short of the requirements to supply the diocesan candle factories. Up to the beginning of the war the largest quantity of wax was imported from Germany, most of it coming from the famous Luneburg wax bleaching works. The raw material was not the product of Germany, but was obtained from countries all over the world, by numerous German agents. Anyway, the Russian diocesan candle factories depended chiefly on this source for their supply. War has now closed this market, and the writer hopes that it may be the commencement of the permanent closure of the import of wax from Germany and Austria to the great benefit of Russian bee-keepers, who could derive the profit of the money that went out of the country for the purchase of beeswax. He says bee-keepers can themselves do much to prevent the importation by increasing the production. In the meantime they should economise in the use of foundation, using only strips as starters,

compelling the bees to build combs, more particularly as this year wax is sure to be dearer. He also advises bee-keepers to turn their attention to the production of wax, for which there is always a large demand and a ready market. M. Kojevnikoff also says that until Russian bee-keepers can supply the demand it will be disheartening to be obliged to go back to Germany for the produce, and although England and France will be able to supply some, he thinks that as Germany has had her agents in different countries Russia can follow the example and have her agents also, and thus be independent of the German supply.

Action of Formic Acid in Trembling Maladies.—We read in the *Journal de la Santé* that of all the actions of formic acid on the muscular system the most remarkable is that on the tonicity of all the muscles. It resolves itself into a healthy tension of the muscular fibres. It is therefore advisable to observe the effect that formic acid would have in certain cases of trembling where tonicity was weakened. It has been used in certain forms of trembling, and by the effect produced it has been noticed that no other drug acts in so rapid a manner or so directly on this trouble. It is stated that formic acid is far superior to hyoscyamine, which is the usual remedy for such cases.

Sugar for Autumn Feeding.—M. Cavet, in giving an account of his experience in the *Bulletin de la Société Romande d' Apiculture*, says that if a good syrup is given to the bees in autumn, the net result for wintering will equal the amount of dry sugar used in making the syrup. Therefore if a colony is short of provisions in August, and it is estimated that 16 to 18 kilos is required for wintering, it will be necessary to give the colony syrup which contains 16 to 18 kilos of sugar weighed when in a dry state, and he concludes that such a plentiful supply of provisions of first class quality for wintering will always be one of the principal factors of success in bee-keeping.

The War and Journalism.—On the outbreak of war, all Bee Journals from Germany and Austria-Hungary ceased to arrive in this country. The only journals in the German language now come from Switzerland. The Swiss papers, both French and German, come regularly, although somewhat late. Many of the French papers have not appeared since the war commenced, and those that have turned up are very much behind time. Three, which we have just received, contain precisely the same articles, and are merely reprints under different title covers. One of these announces its discontinuance pending the duration of the war, and two of them are for the future coming out once every two months if they have sufficient support to enable them to do so. The Russian papers still arrive, but we have only just received the November numbers. The Italian journals and those from other European neutral countries also come, but very irregularly, so that it is evident that the war is making its baneful influence felt amongst bee-keepers as well as others.

A COTSWOLD BEE-MISTRESS.

This view of a Cotswold cottage and bee-garden is presented to the reader as typical of scenes that are frequently to be met with among the quaint hamlets of the Cotswold Hills.

The cottage is the home of a cheerful couple, Mr. and Mrs. Bowles, of Notgrove Village, and it has been in the family for something like 100 years.

"Willum," as he is popularly known, was for many years an earth-stopper to the Cotswold Hunt, and he will tell numerous tales of his nights' work in the woods, and of the early days when, as a boy, he used to help in "mindin' the bees," which his mother kept in the same old corner where hives stand now.

The old man was having his midday "nap" when the camera was ready, or I should have liked to have had him in the picture.

However, the ordering of the bee-garden is left much in the hands of Mrs. Bowles, because, he says, "I can't abide 'em now; they kick I too much when I be workin' near 'em in the gardin'." She feeds the weak casts in spring, either in the time-honoured way of a saucer pushed under the skep or by means of a scooped-out alder stick, which is filled with syrup and pushed or thrust right inside the narrow entrance.

Swarming commences about the latter end of May if the season is good, and continues in a "happy-go-lucky" manner until July comes in.

It is rare fun having an apiary of skeps, I can assure you. You get first swarms, and "cuts," a "smart," and a "lob" which is as big as a duck's egg. Then you may have a maiden swarm from an early swarm hived in a small skep, and if luck is on your side you may even get a stray swarm or two from outside, which helps in increasing the number of stocks for "taking up" time.

It is an interesting sight on a warm evening to see the great clusters of bees "hanging" out all over the face of the hive and down between the legs of the stand.

When the bees swarm they generally lodge on the nut-bushes over the hives, or on a low plum-tree near by, and are

A COTSWOLD BEE MISTRESS.

easily hived by the bee-mistress, after the "tanging" has induced the bees to settle quietly. Beyond putting two sticks inside the skep as supports for the combs, nothing is done to assist, and so they go on unaided and unhindered.

Frequently at this period the hives would number ten or fourteen, but towards August the old man would blow in a puff of smoke from his pipe and "heft" the hives, marking the heaviest swarms and the lightest cuts as those to be taken, and leaving the old lots for swarming another year. But when a hive got too old and shaky the bee-

THE QUAINT COTTAGE OF A COTSWOLD BEE MISTRESS.

The passing of the swarming season brings a pleasant change, when the bees settle down once more to the peaceful duties of honey-making.

mistress would have it taken and a swarm in a new skep left in its place. In former years it was the sulphur rag and pit that did its deadly work at the bottom

of the garden, but now the bee-mistress prefers the more humane plan of having the bees driven out to save their lives.

"Taking time" over, there comes the draining of the honey, the brewing of metheglin, a delicious and wholesome drink, and the rendering of wax.

For days in the cool kitchen would stand the pans into which the honey dripped from cheesecloth bags hung from the rafters; and, oh! the wasps, they would come from their holes in hundreds, until the bottles of stale beer hung about the door were solid with drowned wasps. But these troubles were soon forgotten when the draining part was over and when the honey was safely tied down in the large earthenware jars.

The little profit that results from the old-fashioned skep system is much appreciated, while the pleasure derived from tending the bees during the months of sunshine assists greatly in brightening the somewhat uneventful lives of our village folk.—A. H. Bowen, Cheltenham.

THE PAST SEASON.

To many the season just gone has been their best. During June and early July clover honey came in with a steady and full flow. Later, a period of cold winds and a chill temperature ensued; but from first to last the heather yielded copiously, and a bounteous harvest resulted. To damp the ardour of not a few low prices have ruled, and honey sales have been sluggish. Old customers have taken only small quantities, perhaps viewing honey as a luxury, and undoubtedly the war has had an adverse influence. Locally most of the clover sold at 9d. and 10d. and heather at 1s.; but in many northern towns it was resold in shops at that figure, and at present it is being retailed at almost any figure it may fetch.

Swarms did exceedingly well as a rule, and there were many of them. Owing to the prolonged abundant flow several gave good surplus returns, as the following two examples may show. My own best gave 86 sections of beautiful heather honey, all well sealed and highly finished. A mere novice, from a swarm which issued in the latter days of June, has 118 splendid sections, which he sold at 1s. each. Many swarms weighed from 5lbs. to 6lbs. Unfortunately, owing to the excessive heat prevailing, not a few went to regions unknown.

Isle of Wight.—The disease is still working sad havoc in many places in the North. Professors and bacteriologists on the staff of Aberdeen University have been investigating cases of this disease. A member of the staff recently informed me that they have been unable to discover any signs of *Nosema Apis* in the large number of specimens forwarded them. Further investigations are to be carried on during the coming season, but the grant allocated is far too small to insure exhaustive research. I have repeatedly drawn attention to the entire absence of *Nosema* from cases of undoubted "I.O.W." Dr. White, Washington, found no traces in specimens I sent across two years ago.

It may be interesting to mention that following my restart there has been as yet no renewed outbreak. It may be that the seeds of the evil are more easily killed out by the lapse of time and care than was thought. The statistics I lately quoted from America prove that they can be got rid of by boiling at a lower temperature than either kind of foul brood. Perhaps, too, a lesser degree of cold may render them innocuous. I trust that others restarting after an interval have found no recurrence of the disease.

Northern Associations.—Whether it is the long distance between members, the inaccessibility to many of the central towns, or the cold nature of northern latitudes reacting on our proverbial reserved dispositions, the fact is indisputable that bee-keeping associations do not take firm root and grow in our Northland. A brief review of past attempts will show that they have had no abiding place, but died of inanition after a few brief years at the most. Caithness possessed a B.K.A., but it quickly declined. Sutherland had an Apiarian Society, short-lived and small. Ross-shire had, and has, many enthusiastic bee-keepers, but combination is not much favoured. Inverness (and the North) inaugurated an Association two years ago, but it appears to have become inarticulate. Nairn, too, could boast at least a local Society, but it dwindled and died in its youth. Morayshire made more than one attempt, each of which proved abortive. The "Banffshire" from the start has been a *Banff* one. The "Spey Valley" was killed in its infancy by "I.O.W." Kincardine has a small Bee Club.

The Aberdeenshire B.K.A. alone in the North flourishes and grows. During 1914 it more than doubled its membership. A recent addition to the list of Vice-presidents, Mr. A. H. E. Wood, Mavisbank, Banchory, now Chairman of the Committee of Management, is doing

excellent service, not only by taking an active interest in the organisation and work of the Association, but also by enlisting the sympathy and support of the landed proprietors in the county and elsewhere. Mr. Wood has been for long a most enthusiastic bee-keeper and lover of bees, and has generously contributed to the funds, not only locally, but to the Central Association in London. In securing the gratifying increase in membership the Managing Committee, the General Secretary, and local secretaries all helped; but the palm in securing new membership has been carried off by the enthusiastic secretary for Deeside, Miss N. M. Robinson, a First-Class Expert of the British Bee-keepers' Association, who obtained in 1914 over 100 new names. In her expert work she has walked, cycled, motor-cycled or motored over 2,000 miles, and everywhere she found herself a welcome visitant. In many cases she has been again and again invited back to see the bees, to diagnose suspicious cases of disease, or to help to cure bad cases. In time we shall expect to hear more of this Association, which is going ahead so strong. An earnest effort should be made all over the county to carry out the good work done on Deeside. There is no reason why the membership of this Association should not reach anywhere from 500 to 1,000 within the next few years. The fact that, at last, the Board of Agriculture have sanctioned the appointment of an Instructor of Bee-keeping in Aberdeen should give an impetus to the industry in the North, and greatly aid the successful carrying on of associated effort.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

HONEY JUDGING COMPETITIONS.

[9112.]—Does not the confession of Mr. L. S. Crawshaw (page 1) point out the fallacy of the utility of these? They appear to be very much like the block test at an agricultural show, where the prize is carried off by the best guess grocer or baker instead of by the farmer or butcher.

To my mind, the B.B.K.A. would do far better work in the training of judges if they held classes with a competent teacher and proper samples to demonstrate with. Again, from a hygienic point of view, these competitions are objectional. Fancy tasting eight samples of honey after a number of other people had been testing by inserting the taster into the honey direct from their mouth. Ugh!

Again, why stick to honey only? There are very few who understand how to judge wax, and at the Dairy Show in one class the judge gave a very good demonstration of how not to do it. He evidently picked out samples that would not have won at even a local show for the award of honour. Three exhibits that should have stood 1st, 2nd and 3rd respectively were out of the money altogether, although in all my experience I have not seen better ones staged. Not being an exhibitor of wax, I feel free to criticise that class. I should like to do the same in the others, but as I was interested in the manner indicated I might be accused of bias, so will content myself with saying what a pity it was that the judge did not bring to bear upon some of his awards that keen perception which enabled him to detect (at the suggestion of Mr. Crawshaw) "*seeds* of fermentation" which were not present in the honey judging competition, but which were "plants" at the Dairy Show. But then perhaps he judged the latter after lunch.

May I say how pleased I am to see that our noble and veteran Mr. Cowan, together with the author of that unrivalled work on "Judging," are to officiate at this year's Royal? To those who wish to know how honey, wax, &c., should be judged, I would say, visit the Royal and take careful note of the awards. To exhibit in every class possible under these splendid judges is the resolve of

AN EXHIBITOR FOR THIRTY YEARS.

PRESS CUTTING.

THE ORIGIN OF HONEYMOON.

The Irish were not the only people in early times to fully appreciate the patriarchal advice- eat honey because it is good. The ancient inhabitants of the northern countries of Europe originated the custom of presenting to each newly-married couple a supply of "honey wine," a certain quantity of which the happy pair were obliged to partake of daily for about thirty days after the wedding. The period for imbibing this delicious beverage was called the honey-month or honey-moon.—From the *Irish Independent*.

ROYAL SHOW FUND.

	£	s.	d.
Donations already received ...	23	3	0

WAR RELIEF FUNDS.

	£	s.	d.
Donations already received ...	3	6	0

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

K. F. Stuart. *Foul Brood. Closing entrances in Winter.*—(1) We cannot say, but it is probable they will. Keep the hives supplied with Apicure and Naphthaline, and medicate all food with Naphthol Beta. (2) Do not close the entrances entirely, but darken them. Take a piece of thin wood 5 inches long on one edge and 4 inches long on the other and 3 or 4 inches wide. Nail a narrow lath, $\frac{3}{8}$ of an inch thick, at either end, and place in front of the entrance, laths downwards and the long edge next the hive. This will form a tunnel, allowing ventilation and excluding light.

Feark (*Essex*). *Preserving Wood of Bee House.*—We should prefer creosote. There would be a possibility of it tainting the honey when first done unless care was taken, but if the wood is treated now the smell will have disappeared by the time of the honey harvest. Do not leave the honey exposed to the air.

M. Boaler (Warwicks).—(1) Write Mr. H. Wigley, Hartridge, Gravesend. (2) It is a matter of individual fancy; we do not use one. (3) Yes, under some circumstances, but it is not much used. (4) You may do so. Some bee-keepers use a shallow frame super of worker comb for the purpose. (5) You may do so, but it is not advisable, as it disturbs the bees too much. (6) The secretary is Mr. J. Ingerthorpe, Knowle.

Mrs. R. F. Rendell.—Any of the manufacturers who advertise in our pages will supply one. Write to them for price lists.

Scot (Glasgow).—We agree that when tripped it is quite safe to claim Adam and Eve as a precedent; they died too long ago for any reflection to hurt them.

Suspected Disease.

W. T. E. (Chislehurst), W. H. B. (New Eltham), N. C. Elston (Monmouth), T. W. J. (Sheffield), J. C. B. (Dumbarton).—It is "Isle of Wight" disease.

G. E. H. P. (Salop).—The bees are suffering from "Isle of Wight" disease. The comb contains Foul Brood of old standing. Your advice was quite right, and the owner cannot do better than follow it to the letter.

C. E. A. (Lynn).—The bees have been dead some time, and are too dry and mouldy for diagnosis. The symptoms all point to "Isle of Wight" disease. You might try Banats or Dutch.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1*d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3*s. per* ½*in., or* 5*s. per inch.*

PRIVATE ADVERTISEMENTS.

SPLENDID quality honey, packed in Lee's commercial packages, 15s. per 28lb.—AVERY, Deverill, Warminster. v 13

FOR SALE. five 28lb. tins good honey, 15s. each, or clear £3 10s.—T. STAPLETON, Gwinear, Hayle, Cornwall. v 14

LIGHT coloured extracted honey, 28lb. tins, 60s. per cwt.; sample, 2d.—Apply, T. EVERETT, Soham, Cambs. v 15

2 CWT. fine quality honey, medium colour, 60s. per cwt., on rail; tins free; sample, 2d.—H COLEMAN AND SON, Sherington, Newport Pagnell, Bucks. v 16

WANTED, Rymer honey press, good condition. —Offers to JOHN PATON, Ballinluig, Perthshire. v 17

BRITISH BEE-KEEPERS' ASSOCIATION

The monthly meeting of the council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, January 21st, 1915. Mr. W. F. Reid presided, and there were also present: Miss M. D. Sillar, Messrs. E. Watson, T. Bevan, R. H. Attenborough, J. Smallwood, H. Jonas, J. B. Lamb, O. R. Frankenstein. Association representatives: A. D. Woodley (Berks), G. S. Faunch (Essex), D. Seamer (Lincs), F. W. Harper (St. Albans), and G. Bryden (Crayford), and the Secretary, W. Herrod-Hempsall.

Letters expressing regret at inability to attend were read from Sir Ernest Spencer, Messrs. T. W. Cowan, A. G. Pugh, C. L. M. Eales, G. J. Flashman, W. S. Sanderson, Major Sitwell, and Rev. F. S. F. Jannings.

The minutes of council meetings held on December 17th and 22nd were read and confirmed.

Mr. J. W. Peake was elected a member.

The following associations nominated representatives to the council, and were accepted: Soke of Peterboro' and District, Mr. Hardingham; Yorkshire, Rev. F. S. F. Jannings.

The report of the Finance Committee was presented by Mr. J. H. Smallwood, who stated that payments into the bank for December, 1914, amounted to £52 16s. 7d., the bank balance being £203 15s. 7d. Payments amounting to £17 17s. 6d. were recommended.

Previously in the day Dr. W. Anderton and Mr. B. Blackbourn had attended and lectured before the examining board, and the report was presented by Mr. J. B. Lamb; it was resolved to grant expert certificates to both candidates.

A letter was read from Colonel H. J. Jolly offering to again present a W.B.C. hive as a second prize in the W.B.C. Memorial Medal competition, and the same was accepted with thanks.

Next meeting of Council, February 18th, 1915, at 23, Bedford Street, Strand, W.C.

SOUTH STAFFS. AND DISTRICT B.K.A.

On Saturday, January 16, at the Temperance Institute, Dudley, the above Association held one of the most successful gatherings since its formation.

Mr. C. C. Thompson occupied the chair. The hon. secretary read correspondence and an apology for his absence from Captain Green, who is now away with his regiment, wishing the Association every success.

It was reported that since their last meeting several members had enlisted in the army, and Dr. Lloyd, of Cradley Heath, chairman at the last meeting of the Association, was now doing his duty in the Royal Navy.

Already arrangements have been made for other members to look after their bees during their absence, and the Association wishes them good luck and a safe return.

During the meeting a quantity of extracted honey in jars was staged, and all received Certificates of Merit for good quality.

The hon. secretary then gave a lecture on Bee-keeping, illustrated by lantern slides, in which some views showed Northumberland bee-keepers with their bees at the moors, and others bee-keepers holding a pic-nic amongst the heather. A series of slides illustrating the various stages of "Isle of Wight" disease were highly appreciated.

Refreshments having been partaken of, and Mr. Thompson having been thanked for his services and the hon. secretary for his instructive and interesting lecture, a pleasant evening was brought to a close.

It is hoped to hold the annual meeting some time in February.—JOSEPH PRICE.

BLURTS FROM A SCRATCHY PEN.

CONTINENTAL WANDERINGS.

It was at the Hotel des Alpes, at Lucerne, that we again made acquaintance of that deep, mahogany-coloured honey which we had tasted at Rome and other places in Italy. You meet with honey on the table of every hotel in middle Europe. I wish our English hotels would imitate the example. I have called it mahogany-coloured, because, that is the nearest shade I can think of. I cannot say that I like it so well as our English honey. It has an inclination to make the tonsils smart. In Rome we were told the acacia trees were responsible for this, and for its dark colour. What a stupid I was not to get a sample for our Mr.

Hayes; he would probably have been able to settle the question.

We had a very early breakfast. Our train was timed to depart about 6.30. As you all know, Continental folk take their meals, as much as possible, in the open, so our "déjeûner" was served on the verandah, which, as in most Swiss Châlets, runs quite round the house, the much-overhanging eaves protecting against rain and sun. Literally, at our feet was the glorious lake, for only a narrow roadway intervened. In the blue waters, deep down, we could see the leather-coloured carp and the big chub lazily swimming head to stream. On the surface the smaller fry were playing, ever and anon, their silvery sides flashing as they chased each other in mimic struggle. Farther out, where the river Reuss began to measure its force ere it started on its long journey Rhinewards, the brown trout leaped in the air; if in pursuit of the tempting moth, or in sheer wantonness and joy of life, I cannot tell. So gentle was the motion of the waters, as they left the lake behind them, that were it not for their laughing ripple, as they toyed with the row-boats moored to its edge, you scarce could have told that a river was born.

Across the broadening lake, the white mists climbed the mountain peaks, until all but the very highest were o'ertopped. The never melting snows of these, the morning sun had kissed. Blushing and glistening there they stood, lone and solitary, coral islands, in a waveless sea. "Pilatus" the dark and gloomy, Stamerhorn, Jungfrau, Schreckhorn. These were not difficult to discern, but of the rest, who, save one of the country-born, can tell their names! I, a wanderer from over the seas, what could I do? "Stocks" and "Horns" and "Bergs!" Their number was confusion; sufficient it was for me that I should be there. Little cared I how they called these hills. It was the glory of the landscape which enthralled me. The blue sky, the waters even more blue, the shrouded valleys, and the red roofed town just waking for another day. Yes, it was good to be there.

But, stay! I am galloping on too fast. Here am I telling our departure from Lucerne, and I have not yet said how we arrived there from Milan. Again another mountain climb; again, as the previous day, precipice and mountain torrent, wild gorges, and meadows with tinkling kine. It was at Chiasso we left Italy, and *via* St. Gothard tunnel we reached Flüellen. That long, long struggle to reach the pass. Poor engine, how it panted, and puffed, and snorted like a thing with real life, and even had to stop for breath, as it were, when the gradient was so severe. I really felt sorry for it. At Flüellen, then, we touched Lucerne's lake, loveliest of all Switzerland's lovely lakes, reminiscent of all its struggles for freedom. What "bricks" these Swiss have been in defending the right to govern themselves. Even Cæsar found them foemen worthy of his steel. "The third part of all Gaul," so he writes of them and their country, "who among themselves are called Helvetians." Possibly I am a little too romantic in my ideas, not sufficiently matter of fact for the times in which we move. I had coached myself up in the legends, the folk-lore of the locality. I knew every tale of William Tell. If a trirème had put out from one of the wooded bays, or even a boat manned by rowers clad in green with Alpine hats, it would have been no astonishment to me. You may imagine, therefore, my horror, when lying, warped to the landing stage, I discovered, steam up, ready to carry us down the lake, an ordinary Thames steamer, such a one as it is possible to see any day in the summer time lying off London Bridge, embarking excursionists for Margate. Oh! the shock! It was dreadful. But there was no help for it. I had to gulp down my sentiment, and go on board, or else take the train, and who, except perhaps an American doing Europe in a margin of time, would sacrilege Lucerne, by seeing its beauties through the windows of a railway carriage? However, once on board there was some little interest in studying the representatives of the various nations there assembled, in listening to the confusion of tongues. That tall man with the red flowing beard and the burr in his speech, surely he was a Dane. The guttural grunt of the German "Frau" soon told her nationality. There was a peasant for one of the intermediate stations, sabots on foot, and blouse-clad; shouldering him on the broad seat which gave accommodation on the upper deck were a Yorkshireman and his good wife. I listened to their conversation; it was of Leeds and Harrogate. There was no mistaking that lady in the high-heeled shoes, conspicuously protruded to call attention to the stocking of lace-work and the dainty ankle. Her coquettish ways and studied poses were reminiscent of Parisian boulevards. But while I am quietly taking my notes of these my fellow-travellers, may it not be that someone else, too, is quizzing those three strange-looking folk, evidently from England, one a lady, tall as to height, with her two companions clad in tweed and cap on head, faces somewhat bronzed by the fervour of Italian suns.—J. Smallwood.

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

Procuring Surplus.

(Continued from page 10.)

There is also a right and wrong way of putting in the foundation. To obtain the greatest strength the point of the arch should be at the top, as seen on the left (Fig. 38), and not one of the sides as on the right, this position is attained if the lines of cells run parallel with the top, as on the left of (Fig. 30), instead of diagonally as on the right. If the section is split and grooved, after folding, as shown in (Fig. 35), the sheet of foundation is pushed with a sliding motion into the groove (Fig. 40) until it reaches within ¼in. of the bottom, the top is then bent over by rubbing the thumb along it and the second half folded down. If the foundation is pushed right to the bottom it may sag and give a deformed comb; the bottom groove is not really necessary, and is only put in as it would be difficult and tedious to groove the two sides and leave the bottom plain. If the foundation

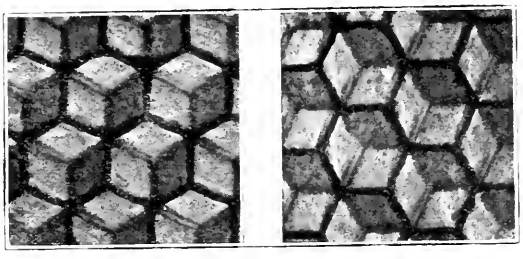


Fig. 38.

is pushed right to the bottom sagging can be prevented by punching a round hole in the centre. No. 5 (Fig. 36), by means of a punch used for cutting gun wads. The bees fill this up when the comb is built. If a plain split top one is being filled then the foundation is held in the right hand with the edge projecting about ⅛in. above the top edge, while the second half is pressed home (Fig. 41).

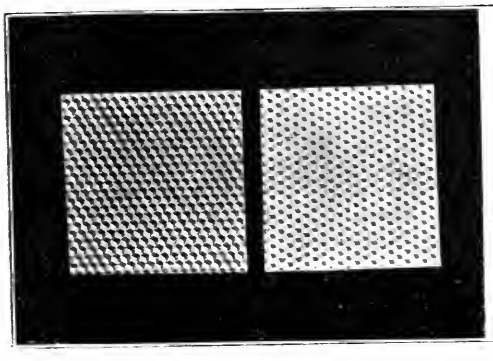


Fig. 39.

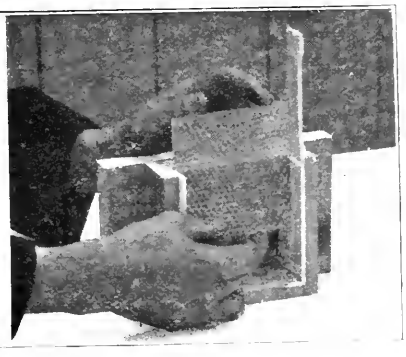


Fig. 40.

Another good method of fixing is by means of the Howard block (Fig. 42). This consists of the outer block, as illustrated before, but it has a square block of wood half the depth of the section in thickness fixed in the centre so that the section just fits over it, with the groove level with the block top, the top is hinged, and a round-head screw fixed underneath the top half so that when closed it forces the second half of the split top into position. The

foundation is pushed into position in the grooves as already explained, the loose pad of wood, which is the size of the inside of the section, is then laid on the top (Fig. 43), pressed down tight to keep the foundation in position during the folding

Fig. 42.

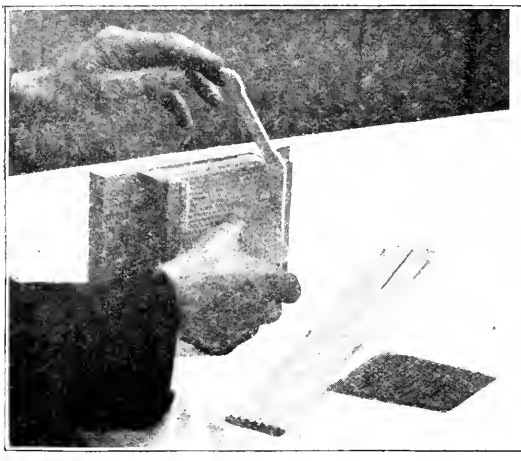


Fig. 41.

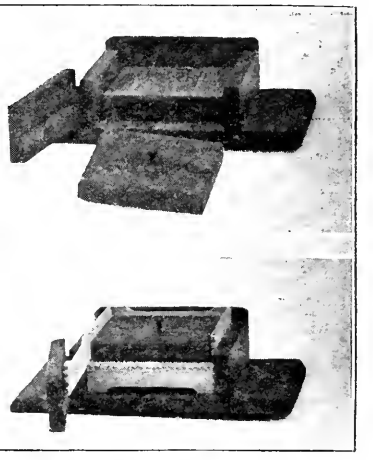


Fig. 43.

process (Fig. 44). The top pad is then removed, the hinged portion opened (Fig. 45), and the section lifted out, fitted neat and quite square.

Where a large number of stocks are worked for sections the use of a block for folding is slow and irksome; with a little practice the following method will

Fig. 44.

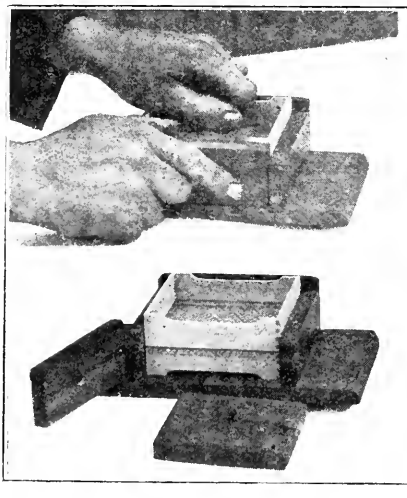


Fig. 45.

Fig. 46.

be found to be more expeditious and the work quite as true. Arrange the sections so that the split top is next the operator, with the left hand hold the farthest end so that the thumb and first finger are on the top, in the right hand the half to be folded is held between the finger and thumb (Fig. 46), with one rapid forward movement the section is folded and the lock joints brought into alignment. A light tap with a hammer completes the work (Fig. 47). The foundation should not be too soft or it will buckle when an attempt is made to fit it into the section, it should be kept in a cool place, so that it is fairly stiff, when it can be slipped into the

groove, as seen at (Fig. 48), and the second half of the top folded down and driven home with the hammer.

In all cases after folding the foundation protruding above the top should be cut off with a sharp knife (Fig. 49).

Fig. 47.

Fig. 48.

Foundation for sections can be purchased cut into squares of the right size; it is also sold in long sheets which will cut sufficient for three. To cut this to size is a difficult operation to some. A template can be made, but a ready

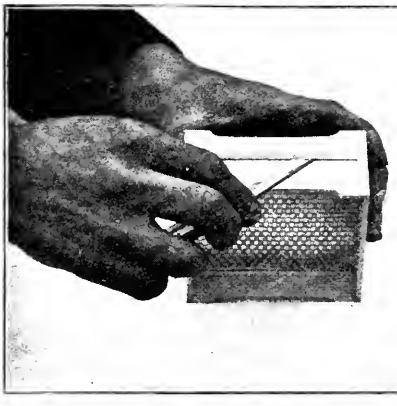


Fig. 49.

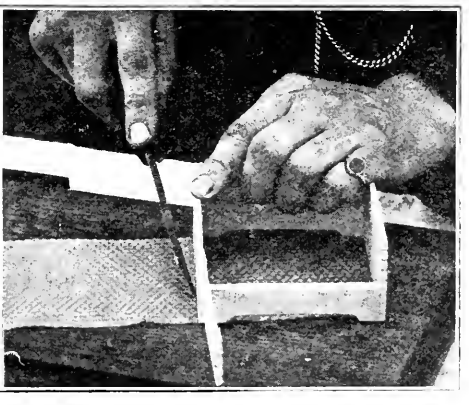


Fig. 50.

way is to lay the sheet on a table, fold a section and place it so that the end edge is butt up to the inside, then cut on the outside, of the other side of the section (Fig. 50); this makes it just the right size to slide into the grooves.

(*To be continued.*)

CAPPINGS & COMB

Paint as a Steriliser (p. 443).—Why should not this act perfectly, D. M. M.? I have both used it and advocated it for years for this purpose. I do not see how germs imbedded in paint can be dangerous. And I should expect oil to have a similar preventive effect, although I have not made any direct experiment. This might easily be done. Some scales of foul broody matter might be saturated with oil, and then fed in syrup to a nucleus colony. I do not believe that the germs would be heard from again, but the

experiment should be tried to settle the point.

Dealing with Disease (p. 452).—Mr. Heap hardly proves his case that "wild" colonies may be ignored. The point he ignores is that if the wild colony is healthy it is still liable to take disease; and, if diseased, it may disseminate disease: and, if it die, the hive may be occupied afresh. In this case Mr. Heap does not claim that the matter is ended, and though there have been claims that the combs were free from danger, this has not been scientifically established. I cannot trace having described these wild colonies as a "serious menace," but they are more numerous than town-dwellers perhaps know, and are often highly inaccessible. Compulsory power to deal with them is all very well, and Mr. Heap speaks of it glibly enough, but how is it to be obtained in face of organised opposition? Mr. Heap might explain. I have had some experience of the working to obtain legislation, but cannot trace having received any support whatever from Mr. Heap, and I think that if he had my direct experience he would not speak so easily of such legislation. With regard to one other matter he raises, I am sorry if my reference to "Mr. Heap's microbe" was not clear to others beside himself. Mr. Heap challenged the production of this microbe (p. 346), and I merely referred to it in jest. I should have thought the nature of the reference would have made the intention perfectly clear, and a disavowal of parentage by Mr. Heap quite unnecessary. Needless to say, I hardly credited him with so great achievement, and I willingly withdraw any accidental aspersion.

Bees in a Hat (p. 454).—At last, and in these days of feminine rights, too, has man come into his own, and by way of a bee in a beaver! Up to now bee-hive hats have been the woman's prerogative, and even the proverbial "bee" in a bonnet has only been countered by the Mad Hatter, who had tea in his hat! However venerable this headgear, if brimful of honey, it must have been a "topper," and might well have been labelled with that of the Mad Hatter, "In this style, 10s. 6d."

The New Heading (1915 cover).—I am afraid I am conservative, and apt to regret the passing of the old, even when the new is possibly better. If I may venture any criticism upon the new heading, it would be to suggest that the title of the journal might be heavier, to prevent its being overweighted by the heavy type of the advertising matter, a fault of which the old heading was not guilty. And the outside border might be in heavier line to balance and emphasise. This criticism does not in any way detract from the artistic nature of the new heading, and the old journal will no doubt be appreciated as much as ever in its new dress. There is a new name on the cover, too, altered for reasons which appear good to the owner, but it is to be hoped that bee-keepers will still be able to find, under the new label, their old friend, Will Herrod.

Helpful Hints (p. 9).—There does not appear any reference to the section, No. 5 in fig. 36, and we are left to conjecture the meaning of the black disc in the centre. Is this a hole in the foundation, and, if so, what is its purpose?

Early Brood (p. 16).—I have found brood rearing in progress as early as in the case given by Mr. William Macdonald, but invariably, as in this case, in straw skeps, which, so far as shape and material are concerned, are ideal hives for encouraging early progress. Herein lies part of the explanation why this type of hive throws early swarms.

The American Gallon (p. 16).—I must admit that I did not know, and quite overlooked the possibility of a difference between, the English and American gallon, and I think this difference is not generally realised on this side. I am very glad to have drawn attention to this, although I wrongly attributed an error to the printer. To prevent error and difficulty, differences of measure should be noted in all cases where American quantities are quoted. The American pint of water weighs exactly one pound, the English pint weighs one pound and a quarter.

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"ISLE OF WIGHT" DISEASE AND "WILD BEES."

[9113] For the sake of lucidity I designate such bees (*Apis mellifica*) as are not under domestication, "wild bees."

Your correspondent, Mr. H. S. Watts (October 1st, p. 367), suggests that even though extreme measures be taken by bee-keepers to stamp out disease, it will still

be kept going by wild bees, thereby inferring, as I take it, that it is of little or no use to do anything while there are wild bees about. It may tend to throw some light on this matter if I relate our experience in this connection in New Zealand.

Fortunately we only had a few opponents to bee disease legislation, but one of their chief arguments was that it would be useless to legislate and penalise any bee-keeper for not taking steps to suppress disease in his apiary while there were wild bees about. This question was put to me when before the Parliamentary Committee in connection with our Apiaries Act. My reply was, that doubtless there were diseased wild bees in our bush (forests) and other places, but unless we took steps to eradicate the disease where we could get at it, the evil would get worse everywhere. All animals, I suggested, under natural conditions, are less prone to attacks of disease than when under domestication, and I had no doubt whatever that by adopting compulsory legislation to obtain control over careless bee-keepers, disease would rapidly lessen both in hives and in the bush. This argument satisfied our legislators, and the Act was passed.

The result of seven years' working of our Act is that foul brood has been got under control to such an extent that many districts are now entirely free from it, and even where there are still traces of it, disease practically gives no trouble to the careful man. This, in the face of no end of wild bees in our bush, and there is more bush in one little corner of New Zealand than in the whole of England, or even Great Britain.—I. Hopkins, Auckland, N.Z.

FRIENDLY HELP WANTED.

[9114] Would any member of the Surrey B.K.A. with leisure time help another who is on military service? The bees stand near Cranleigh. I have arranged with a friend, who is not quite capable, but who thinks he could manage if he had someone to whom he could apply in an emergency, and who could offer him advice and look in now and then. Spare combs and supers are prepared. Any willing friend would be doing an old member a very great favour.—A. H. Hamshar, Tilsey Apiary, Bramley, Guildford.

HONEY JUDGING COMPETITIONS.

[9115] If your correspondent (9112) describes himself correctly as "an exhibitor for thirty years," he has been a long time in learning what all good exhibitors ought to know, *i.e.*, not to put all the blame upon the judge when they are not quite so successful as they had hoped to be.

It is quite obvious that the Honey Judging Competition is being used as a stalking horse to enable him to criticise the judge's work at the Dairy Show. If, however, the judging there was not satisfactory, surely that is a factor in favour of judging competitions to help to train men for this class of work.

Again, the reference to Mr. Crawshaw's remarks do not "point out the fallacy of the utility of these," because Mr. Crawshaw says that his opinions "go to show how valuable is such a competition in educating such of us who are called upon to make awards," and adds, "it is very much to be hoped the feature will be repeated."

The suggestion of similarity between a Honey Judging Competition and the block test at an Agricultural Show is not a very happy one, because the person who makes the most correct estimate in such a case, no matter what his profession, is probably using a better trained eye and experience in judging from appearance than a farmer or butcher, who has not such talents so well developed.

In the Honey Judging Competition the sources from which the honey had been gathered had been determined by actual observation, confirmed by microscopical examination, and the prizes were awarded by a majority vote of several competent judges. Now the matter is under discussion, and your correspondent has introduced people's names in his letter, it may interest both him and Mr. Crawshaw to know that No. 1 sample, in which Mr. Crawshaw thought he detected "seeds of fermentation," was awarded the second place in the competition, not only by a majority vote, but also that identical place by Mr. W. Herrod-Hempsall.

It has also come to my knowledge since the competition, and long after the awards were made known, that the winner of the first prize was not, as your correspondent suggests, a fortunate novice in a guessing competition, but a gentleman who has toured no less than seven counties as paid expert, and no doubt such a varied experience, together with his many successes as an exhibitor, enabled him to gain the highest number of marks in stating the sources from which the various honey was gathered, etc.

I have no doubt the B.B.K.A. will always be pleased to consider any suggested improvements in this or any other work they are engaged upon. I may, however, explain that the reason bees-wax was not included in the competition was because it was felt desirable to make this year's attempt as simple as possible.

The objection to tasting has no foundation, because the taster is *not* used in the manner indicated, and if tasting eight

samples is too much for your critic, how would he face the array the judge he refers to had to do at the Dairy Show? How those he advises to note the awards at the forthcoming Royal Show will be able to pass a correct judgment or opinion on same without a chance of tasting or handling in any way is as unreasonable as the whole contents of his letter. ARTHUR G. PAGE.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Cost of a Section.—At what price can we produce a section of honey without loss or gain? Wesley Foster gives elaborate statistics in *Gleanings* showing that, without reckoning apiary management, the cost of section foundation, fitting up, cleaning, packing, easing, and cartage ran to something like 60 cents for a case of 24 sections. He takes care to tell us that this (approximate, 1½d.) does not include the items of interest on investment, depreciation, rent, labour of apiarist, &c. I have been making some calculations since reading his remarks, and a friend and I brought out the cost at 3d. and nearly 4d. Readers, which is right?—or should it be higher?

Trips a Day. Here is Mr. Lovell making another calculation. How many trips a day does a bee make to the field? The conclusions reached were that a field bee makes about *ten* trips a day—a trip requiring from half-an-hour to two hours, or on an average about one hour. Who says *twenty* trips?

The number depends on: (1) the distance of the honey plants from the hive; (2) the abundance of nectar; (3) temperature and weather; (4) length of day; (5) incidental factors, such as age and condition of bee, location of nectar in the flowers, place of storage in the hive, &c.

"*Summering in South Africa.*" Even in this land, where it is something like summer all the long twelve months, bee-keepers have their worries. Although they have no wintering problem to solve summer brings its troubles. Occasionally the heat will melt down every comb in the hive. "South-easters" frequently rage intermittently, sometimes for a week at a time. Even the train service is held up for hours; one can guess what happens to bees, and at times the loss is serious. The small ant in its countless thousands proves highly destructive. Small ants, large ants, black ants, white ants eat honey, kill bees, and some even chew up the very wood of the hive. The "bee-pirate" is so deadly an enemy that at times apiaries are entirely wiped out by this vicious despoiler. Big losses are suffered yearly from the depredations of birds. In the true winter floods may work havoc. Honey thieves, with white as well as black skins, thieve unblushingly. Hives cost more than double what they do at home, and appliances, too, are sold at a high figure. I once rather envied the high price they got for their honey, but as one who had been there told me at the time, the gilding on the gingerbread was deceiving—and the reverse side of the shield told a different tale. I suppose there is no rose without its thorn!

Smoke Introduction.—I venture to prophesy that this method of introducing queens will never take the place of hitherto well-known plans, not from any inherent defect in the thing itself perhaps, but for the following reason, which may explain much. It depends mainly on the individual carrying it out, and each person has a distinctive touch, while the various ways of carrying out the same details are infinite in variety. Mr. A. C. Millar would have to sell or gift his own tender touches to insure success. Introduction by cage is not so much a personal transaction, as it has to be carried out on general lines, easily applied by the average man. A once much-be-praised and much favoured method has recently been revived—the "Push-in-the-Cage." Liberate the queen on a comb, cover her with a cage on a fair area of comb, pushing the cage in as far as the mid-rib. She has thus immediate access to the honey of the hive, and before she is liberated she has room for laying; two very important points in favour of her acceptance. Dr. Bruennich, in the *American Bee Journal*, records introducing 11 queens by the caging method and 8 by flour (meal) method; all the 19 were accepted, whereas of 11 introduced by the smoke plan only 7 were accepted and 4 were killed.

A Back Number.—This is how the editor describes the skep; and he adds, "profitable bee-keeping depends upon modern methods, upon the entire control of the hive, the brood, the queen, the surplus by the apiarist."

Many Men, Many Minds.—In a prize competition on ventilation, invited by the editor of the *Australian Bee-Keeper*, the first prize-man says, "Given an entrance large enough there is no necessity for upward ventilation." The second man favours a "top entrance," which he would have at the front above

the door. The third essayist favours not only top ventilation, as understood by us, but he would have a space open between the lower and upper bodies.

Milk-Pollen.—Both Mr. Beuhne and Mr. Pender, the editor, rather favour "powdered skim milk" as a substitute for pollen. The latter advocates a combination of nitrogenous and non-nitrogenous food. In spring the bees there suffer much from a scarcity of pollen, and some attribute the severely excessive dwindling frequently experienced—known as the Disappearing Disease—to either a lack of pollen or to pollen not suited to the purpose for which it is taken into the hive.

ROYAL SHOW FUND.

	£	s.	d.
Donations already received ...	23	3	0
W. F. Reid	1	1	0
F. Gravil		5	0
	£24	9	0

WAR RELIEF FUNDS.

	£	s.	d.
Donations already received ...	3	6	0

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

[8992] *Spots on the Head of the Bee.*—In the sketch of the head of a bee, which I enclose, you will observe that there are two small spots on each side of the clypeus immediately under the basal joints of the antennæ. I shall be obliged if you will inform me the name and use of same?—W. F. J.

REPLY.—The spots you allude to are called the "anterior tentorial pits" and are outgrowths in the suture which arches the clypeus. On the posterior surface of the head there are corresponding, only larger, pits, called "posterior tentorial pits." These pits mark the bases of the internal chitinous pillars of the head called *meso-cephalic* pillars (see "The Honey Bee," page 19), the opposite ends of which unite with the front wall of the head in the smaller anterior tentorial pits.

[8993] *Controlling Factors in "Isle of Wight" Disease.*—In the following form of microsporidiosis, where all stocks die during winter after being packed down in autumn, apparently healthy they commence dying off in large numbers, showing but very slight signs of dysentery, wings dislocated, abdomen slightly swollen, but drooping.

Would you please give me a brief outline of any controlling factors in this form? W. F. J.

REPLY.—All that we know about the controlling factors in this disease is stated in the "Report on the Isle of Wight Disease," in Supplements No. 8, 1912, and No. 10, 1913, of the *Journal of the Board of Agriculture*. Some of the factors are mentioned in Section VII. and may help to answer your question. We would suggest that possibly the hive may have been infected by "parasite carriers," in which case it may be weeks or months before the symptoms of the disease appear. The authors of the report "emphasise the fact that in the production of this disease as in the production of most others, various factors are concerned besides the mere introduction of the infecting agent." So it is evidently difficult with our present knowledge to determine the exact controlling factors of any of the numerous forms of this disease.

[8994] *Preparing Iodomel.*—In "B.B.J.," January 7, page 2, mention is made of "Iodomel." Would you kindly inform me in your "Notices to Correspondents" how, or where, it may be obtained, or whether it admits of being prepared personally, and, if so, in what way?—RICHARD DUTTON.

REPLY.—We have no other information than that given in the article alluded to, and cannot tell you where the medicament can be obtained, but presume, as it is a French proprietary medicine, it would be sold by French chemists. As no proportions of the ingredients are given it could only be prepared by experts understanding the principles and action of the drugs employed.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

V. M. Brown (*Suffolk*). *Transferring Bees.*—It would be very unwise to transfer now, and would probably result in the loss of the colony.

C. M. H. (*Sheffield*). *Making Flour Candy.*—This is not so much used now, and should not be given to the bees until about March, or when "flying" days are fairly frequent. We should prefer giving artificial pollen in the open. Use 1lb. of pea flour or 1½lb. wheaten flour to 6lbs. of sugar, stir it in when the candy has cooled a little.

Enquirer.—We have passed your card on to the advertiser.

G. M. (Somerset).—There is no reliable cure at present.

J. Allsop (Arnold).—See answer to B. J. (Notts.).

F. Garside (Cheshire).—François Huber was a Swiss naturalist. Though becoming blind at an early age he directed numbers of experiments and observations on the natural history of the hive bee. He exploded a number of false theories and placed the study of the natural history of the bee on a sound scientific basis. He may be described as the pioneer of modern bee-keeping. Born at Geneva in 1750 and died at Lausanne in 1831.

D. Bateman.—They are 16, 18, or 20in. diameter, and 12in. high. We believe Mr. E. H. Taylor, Welwyn, supplies them.

E. Hill (Rotherham). You can only leave the honey exposed in a warm place, free from dust, until it has evaporated to its normal consistency.

Novice (Lancashire).—(1) They should have stores and some brood, but the latter depends much on the season. (2) You cannot do better than stick to natives. (3) In the "Practical Note-Book"; see list of books on page ii. (4) Yes; there is not a better one. (5) It is good for nectar, and also provides some pollen. (6) They are not always vicious, but, as a rule, are much worse tempered than those that are pure bred.

Anxious (Lancashire).—Yes; boiling for twenty or thirty minutes would make them all right, but are they worth the time and trouble?

Honey Sample.

B. J. (Notts.).—The honey is mainly from clover, the flavour is very good. Honey varies considerably in the time of granulation, possibly yours was warmed, if so, that would retard the process. Keeping it in the light in a cold, dry place will help it. The sample you sent is granulating. It will not be likely to ferment if kept in a dry place. When properly ripened before extracting, and free from pollen, honey will keep indefinitely with the above proviso.

Suspected Disease.

A. J. B. (Wood Green). (1) Both lots of bees appear to be free from disease. We failed to find the "worm." It would probably be a larva of the small wax moth. (2) If the combs are in the condition you state it will be best to destroy them. The dust will, no doubt, be caused by the pollen mite. (3) There was no candy enclosed, but a small piece of naphthaline. Candy should not be given in a "feeder," but placed on the tops of the frames. (4) No. (5) It is not possible.

Mrs. A. M. N. (Sussex).—The bees in the black box were affected with "Isle of Wight" disease, those in the white one were too dry for diagnosis. Burn the contents of infected hive, and disinfect it by scorching with a painter's blow-lamp, or paint it inside with a strong solution of Izal or carbolic acid.

J. H. (Harley Wood).—The bees have succumbed to "Isle of Wight" disease. There is no fee.

L. Fletcher (Wimbledon).—The bees appear to be healthy, but are very small. There is nothing wrong in the comb.

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Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS.

FOR SALE, three 28lb. tins honey, 14s. per tin; also three dozen well filled sections, 7s. 6d. per dozen, free on rail.—SEMMONS, Leiston, Suffolk. y 30

REVIEWS.

The Olfactory Sense of Insects, by N. E. McIndoo, Ph.D., published by the Smithsonian Institution, Washington, D.C.—Although a great many investigators have mentioned different parts of insects in this connection, no one has hitherto collected the views of the various writers on the sense of smell in insects. The author, therefore, in this work discusses briefly for the use of students the literature that bears directly on the subject. After alluding to the sense of smell in general, he gives the opinions of a large number of writers who locate the olfactory organs in different parts of the body, such as the spiracles, glands of the head and thorax, œsophagus, folded skin beneath the antennæ, rhinarium, mouth cavity, palpi, antennæ, etc. Dr. McIndoo carried out a number of experiments on different insects, but those relating to bees will interest bee-keepers most. After experimenting on the antennæ, which have been pretty generally considered to carry the organs of smell, he concludes that this is not correct. He agrees with Hicks, who first drew attention to them, that groups of what the author designates as *olfactory pores* are situated at the bases of the wings, and on the legs, while some lie on the sting of the worker and queen bee. The same organs are found on the mouth parts of all hymenopterous insects. In the discussion at the end of the work the author points out why the different structures, such as the pore plates, pegs or cones, and Forel's flasks, can be eliminated as olfactory organs, and gives several examples in connection with the honey bee of the manner in which the different bees respond to odours presented to them. Pore plates are entirely absent in the Lepidoptera. After giving reasons for eliminating the other structures, he concludes that the organs which he calls the olfactory pores are the true olfactory apparatus in Hymenoptera, and possibly in all insects, and that the antennæ play no part in receiving odour stimuli. The work consists of 63 pages, is illustrated, and contains a long list of works referred to. This covers more than six pages, and shows the painstaking care with which the study has been carried out. We can with pleasure recommend it to the student as a valuable addition to entomological literature.

Bee Keeping in Iowa, by Frank C. Pellett, published by the State College of Agriculture, Ames, Iowa.—The author of this pamphlet is the State Inspector of Apiaries, and he has written it with the object of inducing farmers and others to take advantage of the large amount of honey which now goes to waste. He emphasises the fact that the presence of a large number of bees would result in the better cross pollenisation and fertilisation of blossoms, which would indirectly add very much in the production of fruit and seeds of various kinds. After showing some of the large returns obtained from single colonies of bees, he gives instructions how to proceed, and the difficulties to be met. He gives the Iowa laws regulating foul brood, and states the counties in which it is known to exist. The following useful suggestions are made:

Begin small and grow as big as your inclination and opportunities permit.

Never keep more colonies than you can properly care for.

Use only moveable frame hives. Box hives are unprofitable, and the source of many difficulties.

Provide yourself with a smoker and veil with your first colony of bees.

Keep your colonies strong. It is the weak and queenless colonies that are unable to defend themselves against the wax moths.

Never leave bits of honey and wax exposed. This is the cause that usually starts robbing, frequently resulting in the loss of one or more colonies.

Treat diseased colonies promptly. Never risk spreading the disease by delay.

Be extremely careful of honey, wax and appliances from diseased colonies.

Try requeening occasionally with selected queens.

Begin preparations for winter early, and prepare for spring the fall before. Keep down the grass in front of the hive. Many a bee is lost on coming in heavily loaded and being unable to reach the hive because of weeds, grass, etc., in front of the entrance.

Keep the hives off the ground, the bottom boards last longer. Four bricks make a good stand. A small board should be placed against the front of the hive to permit heavily loaded bees to crawl up.

The Bee-Keeper's Library, by Frank C. Pellett, Bulletin No. 2, published at the Office of State Bee Inspector, Atlanta, Iowa.—This pamphlet gives a list of the most important publications on bee culture now available. Some of them with which the writer is personally familiar are described more in detail than those of

which he has no personal knowledge. The four periodicals published in America head the list, then come the Free publications of the State of Iowa, followed by a list of the Government Bulletins published by the Bureau of Entomology, relating to Bee Culture. The list of books other than official publications occupies three pages, so that it is pretty comprehensive. The compiler is the State Bee Inspector, and as so many letters come to him asking for information about books, bulletins, etc., relating to bee culture, he considered it advisable to put the information in printed form and thus save correspondence.

ON PAINTING HIVES.

Things that are well painted and kept well painted last much longer and look better, and this applies with particular force to bee hives which are always subjected to the varying elements of the weather.

Besides preserving the wood there is nothing that freshens up the entire surroundings more than a good coat of paint properly applied to the hives in an apiary.

Plain white is the colour preferred for the purpose, mainly because it reflects the rays of the sun and the hives are consequently cooler; moreover, pure white paint will give better results and is easier and cheaper to prepare than paints which are coloured.

The question as to which is the best paint is often asked. Well, now, by far the cheapest and most satisfactory way is to buy the ingredients and mix them together yourself. After trying many kinds of paint I find that the best results are obtained by stirring into linseed oil pure white and zinc lead in equal quantities, adding a little dryers, and later on some turps to render it workable. The lead and oil are main constituents of any good paint, and as often as not are used without the zinc, but the main objection to this is that it does not hold well and chalks off after a short time in the open air. By adding zinc lead the paint has a harder and glossy surface, holds on better and longer, and is therefore more durable. Too much zinc should not be added, as a coat of such paint will soon crack and scale off.

Occasionally when we have an apiary situated near the road we paint the hives a gloomy brown colour, which renders them less conspicuous when the trees are bare, but for ordinary cases there is nothing to equal white. Any time during the winter is good for painting stocked hives providing the weather is fairly mild and dry. A heavy rainstorm will destroy the work of a whole day, so it is well to wait for a favourable opportunity.

Now that wood is scarce and dear, shall we not insure our hives by painting often?—A. H. Bowen, Coronation Road, Cheltenham.

SHEFFIELD AND DISTRICT B.K.A.

GENERAL MEETING.

The first Annual General Meeting of the above Association was held on Saturday, January 23rd, at the Wentworth Café, Sheffield, over forty members and friends being present. The secretary presented his report and balance-sheet, and although the Association had a small balance in hand, it was unanimously decided to raise the annual subscription from 2s. 6d. to 5s., so that more help could be given to members and more progressive work could be done. Five new members were proposed, and the following officers were elected: Mr. W. Garwell was re-elected secretary and treasurer; Committee: Messrs. S. Livsey, G. W. Morris, E. Garwell, T. Beever, P. Lawson, R. Peart, W. Tomlinson, and P. Ridge. After the meeting a tea and concert was arranged, which proved a big success, several being unable to gain admission, all available space being occupied. In the absence of the president, the chair was taken by Mr. W. Ball. During the evening prizes were distributed to the successful exhibitors at the annual show.—W. Garwell, Hon. Sec.

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A MINIATURE HEATHER HONEY SUPER.

[9116] Will the present 1lb. section always be peerless, commercially speaking, as representing the best form of our comb honey product? I claim that in my apiary it has been surpassed as a thing

of beauty, and equalled as a marketable commodity, by my little heather honey super.

It is regrettable that the bee-keepers in heather districts have changed over to the 1lb. section. I remember seeing in Jedburgh, in 1896, a splendid exhibition of heather supers in 6lb. to 20lb. classes. They filled the long benches with a most attractive display of the craft of the local bee-keepers, but the nimble 1lb. section, the Commercial Excellence, is driving every other form of comb honey out of the market. The super in miniature, however, is capable of much resistance, as its introduction throws out of the competition the commercial advantages hitherto solely enjoyed by the 1lb. section. I feel confident that our beautiful heather honey will, to some extent, be freed from the too great dominance of the 1lb. section, and that our show benches will again do full justice to the cleverness of the bees and the craftsmanship of the bee-keepers.

I have had the idea of a miniature heather honey super ever since that wonderful Jedburgh show. I noticed at Jedburgh that most of the supers afforded no spaces giving upward passage to the bees, thus preventing tiering up, and limiting seriously the honey harvest; but as that is a fault easily avoided I think it needs only to be mentioned here. In 1899 I introduced a small super made by nailing three bars across a 2lb. section, and I sent one as a special exhibit, nicely filled with three bars of honey, and set in a small cardboard box, to the Jedburgh show. I still have the certificate of the Roxburgh B.K.A. pinned to the wall of my bee-hut. This super weighed about one and a half pounds. I felt proud of it, and it was much admired by many others, but it was flimsy, and I gave up the idea after a few years' trial. I then persuaded Mr. Balmbra, of Alnwick, to put on the market a tiering-up super to hold about 8lbs., but it did not get much support.

My progress towards the miniature heather honey super has been helped by seeing the fancy chocolate and bonbon boxes in the shop windows, and I felt that the marvellous cleverness of the bees, and the craft of the bee-keepers, could produce a delightful little box of heather honey more attractive and much more useful than those alluring products of luxury.

During the past heather season a further attempt has been made. This time I placed a 5 by 4 by $1\frac{3}{4}$ plain section on top of another, placed three bars (made of section wood) across the top, and bound all together by pressing over the top and around the sides a square sheet of thin pasted grease-proof paper, which made a neat and firm box, and not a nail in it. The paper, after drying, was slit between the bars, to give tiering-up bee ways, and a starter of wax was fixed on the inside of each of the three bars. Twelve of these miniature supers were finished by the bees in their perfect and fascinating style, and each of them was reversed and dropped into a rather loose-fitting fancy cardboard box specially made for the occasion. The hinged lid of each box was decorated on the outside by a sprig of heather (sewn on) and a fine photograph of bee-hives was pasted on and covered the underside of the lid, which when open was prevented from falling back too far by a piece of tape at each side, cleverly inserted by the box-makers.

These supers contained three little bars of heather honey, each box weighing altogether about one and a half pounds, and when put up in the way I have described sold readily, but a few I gave away to friends. They have been praised by all who have seen them. They are most excellent Christmas presents: a charming reminiscence of the old-time super or dandy reduced to the dimensions of a gem box.

I feel that a reduction in the size of this small super may be necessary, to hold a pound or even less, but having given my progress with the idea to date, I am content to leave the matter with those bee-keepers who may decide to pursue the line indicated, in order to put more variety, charm, and profit into their comb-honey production.

In conclusion, I wish to say that my apiary next season will be run nearly entirely for these miniature gem supers, and that I will also see how they answer for clover honey.—J. N. Kidd, Stocksfield.

PRESS CUTTING.

INGENIOUS GERMAN STRATAGEMS.

According to unofficial news which has reached Egypt from East Africa, the Germans with their black troops, engaged in an action at an East African port which resulted in the withdrawal and re-embarcation of the British landing force, showed remarkable skill and resource in the bush fighting. Ropes were hidden under sand and brushwood and stretched across paths and, when trodden on by our troops, brought down flags hoisted in the trees. By this means the ranges were accurately marked. The fall of the flags

was the signal for a heavy fire from sharpshooters and sometimes from machine guns, which had been hoisted into trees farther to the rear.

Another device, which would almost seem to have been suggested by Kipling's tale of how an invading pack of "Red Dogs" was destroyed by the "little people," was resorted to by the enemy with some success. Hives of wild bees partially stupefied by smoke, were placed under lids in the bush on each side of narrow tracks, along which our troops must advance, some hours before the attack began. Wires or cords, concealed in the same manner as those attached to the range-finding flags, lifted the lids when touched by the advancing troops, and swarms of infuriated bees, recovered from their temporary stupor, were let loose on the attackers. The failure of the attack at certain points is said to have been due as much to this onslaught of the "little people" as to the German rifles and machine guns, many men being so horribly stung in the face or hands as to be temporarily blinded or rendered incapable of holding their weapons. Over 100 stings were extracted from one of the men of the Loyal North Lancashires.

Since the bombardment of Dar-es-Salaam the situation has improved, and the hope was expressed on the East Coast that our forces will soon be able to take the offensive.—From *The Times.*

NOVELTIES FOR 1915.

THE HAYES DENSIMETER.

We have received one of these instruments from Mr. Hayes. They will no doubt prove a boon to judges for determining the comparative densities of bottles of honey in cases where there is keen competition. We append Mr. Hayes' description.

After hearing Mr. Pugh's lecture on "Judging Honey," at the meeting of the B.B.K.A. in October, 1913, I determined to try and find a means of testing what is generally called the "density" of honey, but which, in fact, is its *viscosity.* However, seeing the former term is more generally used, it will perhaps be best to keep to it, as it will be the better understood, and for this reason I have called the instrument a *Densimeter* or measurer of density. After very considerable experiment I decided that this is the most easy and ready way of testing the density of honey.

I append instructions for the use of the instruments, and later on an advertisement will be put in the JOURNAL respecting them. They will only be obtainable from the inventor.

These instruments are carefully adjusted in a scientific way to a standard, and have been tested by several judges, who state that they are just what is wanted in close tests, or by a beginner or anyone who wishes to come to a definite conclusion by a scientific process regarding the density of any samples.

THE HAYES DENSIMETER
(actual size).

To USE.—Hold the densimeter between thumb and finger and allow it to sink into the honey up to figure 2 below normal line, hold it there until you have noted the time; then allow it to sink of its own weight for not less than thirty seconds, or as much more as time permits, keeping it upright with just a touch from the finger, as occasion may require. At the expiration of the time allowed, grasp it with thumb and finger with an upward motion, and read off at the honey-line; which will be clearly seen on the tube. The deeper it goes, the thinner the honey. It should be quite clean, free from honey, and dry for each test, and this can easily be done by washing in a tumbler of water, and drying with a soft cloth.

Two densimeters expedite a large test.

GEO. HAYES, Beeston.

ROYAL SHOW FUND.

	£	s.	d.
Donations already received ...	24	9	0
Mrs. Jannings	0	10	0
	£24	19	0

WAR RELIEF FUNDS.

	£	s.	d.
Donations already received ...	3	6	0
A Gloucestershire Bee-keeper ...	0	10	0
	£3	16	0

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

[8995] *Wash for Fruit Trees.*—For some time past we have had trouble in Nottingham with the Ermine Moth. It is now proposed to thoroughly syringe all hedges, trees, &c., with the wash, of which I enclose you a printed copy. I shall be pleased if you will kindly let me know your opinion of the effect of this wash upon bees. I only started bee-keeping last spring with one hive, which seems to have wintered very well. Consequently, am anxious that they should not be destroyed by this wash. It is composed of : 6ozs. of acetate of lead, 2ozs. of arsenate of soda, and 1lb. of treacle, to be dissolved separately in hot water, and when cool to be added to 20 gallons of water. The trees to be syringed or sprayed first as soon as the colour of the bloom can be seen, and again when the bloom has fallen.—Ermine Moth.

Reply.—The arsenic wash recommended, although poisonous, will do no harm to bees provided the instructions are carefully carried out and the trees sprayed before any of the blossoms show signs of opening. The right time is just when you can discern the colour of the blossoms. On no account should the spraying be done while any of the blossoms are open, as it would be fatal to bees in their search for nectar. We prefer using the same quantity of soft soap instead of the treacle, as it is equally efficient, and not being sweet would not be so likely to attract bees as treacle might do. A fine spray like mist is preferable by far to syringing.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

J. Eston-Hodsoll (Sussex).—*Utilising Combs of Sealed Honey.*—Place them nearer the bees and bruise or scratch some of the cappings at intervals. The bees will then utilise the exposed honey, and the effect will be to stimulate breeding and give the queen room for egg-laying.

A. H. H. (Ilkeston).—*Using Infected Shallow Combs.*—The safest plan is to melt them down. You may fumigate by putting them in a box which can be made airtight. Place a saucer containing 40 per cent. Formalin, into which drop a small piece of washing soda, at the bottom of the box, then put in the combs and close the box; leave it for at least forty-eight hours.

"Novice."—*Removing Bees from a Tree.*—It is impossible to give precise instructions without a personal examination of the tree. Perhaps the following method may help you. Of course, you cannot do anything to save the bees for some time; in fact, until the bees are flying freely. Prepare a small colony or nucleus in a light box. Blow some smoke into the hole by which the bees enter the tree, and erect a

platform close to it. Then fix a Porter escape on flight-hole of tree, so that the bees can come out but not get back. Place the nucleus on the platform with its entrance as near the Porter escape as possible. When the bees leave the tree they will find that they cannot return, and one by one will enter the nucleus. In four or five weeks the queen in the tree will have very few bees with her and these can be destroyed by blowing in with the smoker sulphur fumes, after removing the escape. In the course of three or four days the bees in the nucleus will remove the honey out of the tree and store it in the nucleus hive.

A. T. Town (Abingdon).—*Extracting Honey in Cold Weather.*—You have not made it warm enough. You would probably be able to extract the honey if the combs were kept in a temperature of 90 to 95 degrees for about a couple of hours.

W. (St. Ives).—Will inquire and let you know next week if possible.

G. H. Aston (Coleford).—You had better leave such complicated arrangements alone. Give room in advance of requirements; follow the instructions given in the "Guide Book."

C. D. (Chippenham).—(1) It will be all right if well washed out with boiling water afterwards. (2) It would not be advisable. (3) Yes.

Alpha (Darwen).—(1) Yes. (2) No. (3) Give plenty of room in advance of requirements. You can use a swarm-catcher. "Decoy" hives would quite likely capture many of the swarms. (4) Yes, but you cannot expect any large amount of honey, and some seasons you may have to feed the bees right up to the end of June. (5) Follow the plan given on pages 125 and 126 of the "Guide Book." That particular breed of queens cannot now be purchased. (7) We cannot say when would be the best time in your district. Can you not consult a farmer there?

T. O. D. (Wellingboro').—You will find a chapter on queen rearing in the "Guide Book," or you might get "Queen Rearing in England," by F. W. L. Sladen.

Honey Sample.

D. S. L. (Manchester).—The honeys are all of fair quality. The clear honey is good in colour and density, but rather lacking in flavour. The granulated clover honey, has the same fault, and the granulation is rather coarse. The flavour and aroma of the heather blend are somewhat spoilt by a slight admixture of ragwort. We cannot say in what district they were gathered.

Suspected Disease.

T. H. S. (York).—It is "Isle of Wight" disease.

Beginner (Ayrshire).—The cause of death is "Isle of Wight" disease. We cannot account for the dampness. Do not use any of the combs again.

M. (Birmingham).—There are symptoms of "Isle of Wight" disease.

Novo (Kent), G. M. (Cambs.), G. P. (Kid.), Harborne (Birmingham), and Local Expert (Herefords.).—It is "Isle of Wight" disease.

"Suffolk" (Leicester).—All three are affected with "Isle of Wight" disease.

J. Dodds (Newcastle).—Both are affected with "Isle of Wight" disease. Destroy them, lime, and if possible dig the ground where the hives stood and some distance round. Sulphur fumes or a solution of cyanide of potash will kill the bees, but do not use the latter if you intend utilising any honey the combs may contain, as it is a deadly poison.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as "Business" Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS.

PURE Leicestershire honey, light, excellent quality, 28lb. tins, 16s. each; sample, three stamps.—E. EVERETT, expert, Rosebank Apiary, 40, Linden-street, North Evington, Leicester. v 39

WANTED, bees, in straw skeps preferred.—State price to LARKIN, Wooburn, Bucks. v 38

COMPLETE apairy of 5 stocks.—Particulars of C. HANKIN, "Chimhams," Farningham, Kent. v 37

PURE English honey (light), 28lb. tins 65s. per cwt.; also pure English Beeswax, 1s. 3d. per lb.; samples, 3d.—J. YOUNGER, 29, New-market-road, Cambridge. v 35

FINEST heather honey, 10s. dozen, screw-caps; sample, 3d.—W. HUTCHINSON, bee-keeper, Leek. v 36

A LARGE number of beehives, W.B.C. principle, to be sold at 6s. each, equal to new.—STAPLEY, Potton, Beds. v 34

OFFERS wanted, quantity Westmorland heather honey, 1st grade sections.—BOUSFIELD, Woodbine Cottage, Hartley, Kirkby Stephen. v 33

FOR SALE, three 28lb. tins honey, 14s. per tin; also three dozen well filled sections, 7s. 6d. per dozen, free on rail.—SEMMONS, Leiston, Suffolk. v 30

FOR SALE, 3 cwt. pure Lincolnshire honey, in 28lb. tins, £3 per cwt., or 15s. per 28lb. tin.—H. DRAYTON, New Bolingbroke, near Boston. v 20

AN APPRECIATION.

We have received the following letter from "the front." We are pleased to hear that the "B.B.J." is appreciated out in the war area, and that in spite of the arduous duties of our bee-keeper soldiers they still give thought to the bees as well as "other things they've left behind 'em." We have great pleasure in forwarding on to our correspondent the Journals he asks for up to and including the issue for Jan. 28th free of charge. Perhaps one of our numerous readers may like to forward their copy from that date after it has been read; or it may be they know some other bee-keeper who is out there "doing his bit" who would be pleased to see a Journal now and again.

27210, L. Kettle, R.E.,
Army Signals.,
2nd Army (B.A.R.),
British Ex. Force.

DEAR SIR,—I write these few lines to ask if some of your kind readers could oblige by sending me the "B.B.J." from Aug. 4th, 1914. I left England on Aug. 9th, and have no chance to send cash for same at present, and having been a reader for a few years should appreciate the pleasure. I have had a few close shaves out here, but hope to get back to my bees again. If you recollect, I met you at Normanton Park, Rutland, in July last. The "Record" would do if "B.B.J.s" are not available. I was sorry to leave my bees, but they are in good hands at Stamford. Trusting this will find yourself well. Best wishes for Association and readers.

Yours truly,
L. KETTLE.

HEREFORDSHIRE B.K.A.

ANNUAL MEETING.

General regret was expressed at the absence of Sir James Rankin (President) at the annual meeting of the Herefordshire Bee-keepers' Association, which was held at the Hereford Y.M.C.A. on Wednesday. Alderman T. Preece presided, and also present were the Rev. and Mrs. H. W. B. Mynors (hon. treasurer and hon. secretary respectively), the Hon. Mrs. Wilmot, the Rev. G. W. Turner (Madley), Mr. P. Barneby, Miss M. C. Barneby, Mrs. Glinn (Hereford), Miss B. M. King-King, Mr. J. W. Stephens (Kington), Miss Stephens (Ledbury), Mr. J. Arnfield (Breinton), Mr. John Harris (Holme Lacy), Mr. E. Harris (Lower Bullingham), Mr. J. Seal (Hereford), Mr. T. F. Powell, Mr. J. J. Paterson, Mr. Cole, Mr. T. Powell, Mr. J. J. Paterson, Mr. Cole, Mr. T. Dance, Mr. W. N. Helme (Norton Canon), Mr. G. J. Meredith, and others.

THE YEAR'S WORK.

The Committee's report of the year's work was, as usual, a comprehensive one, and was read by Mrs. Mynors as follows: "Taken as a whole, the past season has not been very favourable to bee-keepers, though some districts have had a much better honey harvest than others. High lying districts appear to have done best, profiting by their later season, as stocks did not experience the check sustained during the latter part of April and the beginning of May by more forward ones situated in the southerly parts of the county. All suffered alike, however, in June, from cold winds and cold nights. The swarming fever experienced in 1913 has been unknown during the past season, in which swarms were very scarce indeed. Apiaries visited by experts in the spring numbered 146, in the autumn 160. No case of "Isle of Wight" disease has been reported by them, but foul brood was very prevalent in the spring, 122 cases then being notified, and 72 in the autumn. In the majority of cases Apicure was used with good results; but in some instances destruction was considered advisable. . . . On the outbreak of war, the Committee offered through the local Press free expert help to all bee-keepers in the county who had joined the colours. A few availed themselves of the offer, and probably some stocks have been preserved which might otherwise have perished through unavoidable neglect." Among other matters mentioned in the report were practical demonstrations, largely for the benefit of cottagers, at members' apiaries, the expenses of which were defrayed by Sir James Rankin, Bt.; the annual honey show held in conjunction with the Rose Show, and the resuscitation of the old Herefordshire custom of a honey fair; the encouragement of members to exhibit at local flower shows, and the steady increase in the use of the Association's honey labels; the satisfactory membership of 225, against 216 in 1913; and lastly, the financial state of affairs. The receipts, including £17 3s. 8d. balance from 1913, totalled £91 19s. 8d.; and the expenses £86 13s., leaving a balance to the good of £5 6s. 8d.

As hon. treasurer, the Rev. H. W. B. Mynors presented the statement of accounts, and added to the foregoing that there were 97 small subscriptions of 2s. 6d., besides those of 5s., and that the largest item in the expenses was £45 15s. 5d. paid to experts for work done throughout the county. The accounts were audited by Mr. J. Porter and Mr. Arnfield, and were duly proposed and seconded for adoption, and carried.

RE-ELECTION OF THE PRESIDENT.

The next item on the agenda was the election of officers, and the Chairman, in expressing the view that he would like to see Sir James Rankin re-elected as president, said he was sure they all regretted that Sir James Rankin was not able to be amongst them. Wherever their President went in the county, and whatever part he took in its affairs, he always did it so whole-heartedly that they all missed him on occasions such as that.

The Rev. G. W. Turner then proposed Sir James Rankin's re-election, if he was willing to accept, which Mr. Powell seconded, and in doing so endorsed the Chairman's remarks. The voting was unanimously in favour of the motion, and, on the suggestion of the Chairman, the hon. secretary was requested to forward to the President a note wishing him better health, and expressing the hope that the members would soon see him amongst them again.

On the motion of the Hon. Mrs. Wilmot, the vice-presidents were re-elected, and Alderman Preece consented to fill the vacancy caused by the death of Alderman W. H. Barneby.

A DUAL COMPLIMENT.

The Rev. H. W. B. Mynors was re-elected hon. treasurer, on the motion of the Rev. G. W. Turner, seconded by Mr. Powell. The Chairman supported by saying that Mr. Mynors was very popular, especially in the district in which he lived, and in which he happened to be one of the lucky ones.

Acknowledging the vote, Mr. Mynors said the finances were fairly satisfactory, and added that it was not well to have too large a balance in hand, and that they had spent their money profitably.

The re-election of Mrs. Mynors as hon. secretary was proposed by the Hon. Mrs. Wilmot, seconded by Mr. Stephens, and carried with applause. In acknowledgment Mrs. Mynors spoke of the calls on her time which the work demanded, and to her other interests, but intimated that she would be pleased to continue for another year, because it might be difficult to get anyone else to take on the office during the war.

The Rev. G. W. Turner remarked that they ought not to let the opportunity slip by without letting Mrs. Mynors know that they appreciated her work. The whole of the society depended on Mrs. Mynors as hon. secretary; in fact, Mrs. Mynors was the society. "Take her away, and we are done," he added. Mrs. Mynors was most energetic in the affairs of the society; and they knew that under her management all that ought to be done was done. As long as she went on in this way, the speaker concluded, they would be more than satisfied.

The Chairman endorsed these remarks most thoroughly, and in saying that the society "was practically dead until Mrs. Mynors dug it up," urged the members to give her all the assistance they could.

A formal proposition was then made by Mr. Powell that the vote of thanks be entered on the minutes, and this was carried with unanimity and duly acknowledged.

The committee was re-elected (with the exception of Mr. C. Chubb and Mr. E. Parry, who had resigned, the latter having left the district), on the motion of the Chairman, seconded by the Rev. H. W. B. Mynors; and subject to their consent, the following were added to the committee: Rev. K. O'Neill (Eaton Bishop), Miss Bradstock (Yarkhill), and Mr. C. Sankey (Kingsland), Mrs. Mynors proposing, and the Hon. Mrs. Wilmot seconding, their election. The two last-mentioned ladies were appointed delegates to the B.B.K.A. meetings, and several names were put forward to act as local secretaries where there are vacancies.

Replying to a vote of thanks, Alderman Preece, speaking as chairman of the County Council Agricultural Committee, expressed the opinion that the society had relieved that body to a very great extent of a duty which would otherwise fall upon them. He was fully in sympathy with the society's work, and was grateful to Mrs. Mynors and her committee.

The "draw" for a new and fully equipped hive ended in Mr. Bray, of Newtown, being declared the lucky winner.

THE MAY QUEEN.

Mr. Caspar Redfield, an American, has written a book called "Dynamic Evolution" (Putnams. 6s. net), in which he shows, contrary to accepted opinion, that personally acquired energy can be handed on to one's progeny. By a careful study of pedigrees in the registers of trotters, milking cows, and setters, he marks the importance of breeding at the period of "highest dynamic development." The case of the milker is of nearest interest

to bee-keepers, as the heavy production of milk is most like the heavy production of eggs that we breed for. Hens would be still more in point, but Mr. Redfield has not yet studied them at length. He says in passing, however:—"To increase laying capacity, eggs for hatching should be taken which are produced by hens when they are in their period of greatest fecundity."

The lesson of the cow is that first, second, or third calves rarely become great, either as bulls or milkers. The famous De Kol II. became the mother of her five famous bulls after she was eight years of age, and the two best of these five were both born after an interval of thirteen months, instead of twelve, from the birth of the next preceding calf. The last fact raises a fresh line not yet followed. The main point is that the average age of the ancestors of the best milking strain is constantly increasing. The average cow becomes a mother at the age of four years and three months, but if she is to be the mother of champion stock (of the same breed) she must wait till she is seven years and five months old.

I suppose that this principle of dynamic evolution would apply to bees somewhat as follows:—Queens should be bred from mothers in their second full year and at their period of highest fertility. The first condition is usually fulfilled. Nobody breeds from a queen less than nine or ten months old, and I suppose we more often breed from queens from twenty-two to twenty-four months old. But there is a great tendency to neglect the second condition by breeding queens at the end of the season. May and June ought surely to be the months in which queens are at their greatest dynamic development. Probably the young queen left at home when the mother swarms is as good as we could have. The mother has by then been laying up to 2,000 eggs a day. Perhaps just before queen cells were begun a growing lack of space to lay in bottled up her energy and increased its head, so that one of the eggs then laid may be the best of her life-time.

On the other hand, when she leaves with a swarm she takes three or four days' rest, then starts laying again *con amore*. The whole hive at this time is at a fever of energy never seen at any other time, and it may be that the eggs then laid are the very best.

Possibly a frame of eggs taken from a swarm would give the kind of queen that we all long for. Sometimes the swarm itself sends out a swarm. What sort of a queen does it then raise? Can anyone tell us from experience? At any rate, the theory of dynamic evolution makes it doubtful that a queen raised in July, when her mother is fagged by the best part of a season's work and is laying less than a thousand eggs a day, can equal a daughter of the same queen raised from an egg laid in the height of the season. —G. G. Desmond, Sheepscombe, Stroud, Gloucestershire.

THE PROLIFICNESS OF HYBRIDS.

A PROFITABLE DRIVEN LOT.

In the autumn of 1913 I was driving a few skeps for a cottager on the hills when he remarked that back in the summer a large cast had issued from one of his skeps, and after being hived had taken wing and flown away over the fields to a neighbouring village.

Here the bees were seen to enter an empty frame hive that was standing in the garden of a farmer.

There they remained until September, but as the bees were in the way I called and got permission to take them, leaving the farmer with the combs of honey. The bees were hived in my own apiary on empty combs, and as the greater number had two leather-coloured bands on the abdomen it was evident that the virgin queen had mated with an Italian, or yellow American drone, from an apiary about a mile distant. They were given 25lbs. of syrup in a rapid feeder, and although a small lot on four frames, the bees wintered strongly. During the spring of 1914 the stock increased until the ten frames—five drawn from foundation—were full.

On May 19 the bees were given a full depth super containing four standard frames of comb and an equal number of foundation, spaced wide.

By June 9th the super was almost full of bees and honey, with all the frames drawn out.

A shallow super was then added, and later on another on top to act as a cooler. By August 6th the three supers were full and were then extracted, and the empty combs replaced for the bees to clean up or fill again if they would.

This extract gave 80lbs. of fine light honey, and a few pounds besides that was taken when the combs were removed for the season, while in the brood combs the bees stored about half enough to winter on.

If this driven lot had been a full colony the return might have been double what it was.

I have frequently noticed the excellent yields given by bees produced from English queens mated with the drones of certain foreign races, and, indeed, this cross would seem to be equal to, if not better

than, that derived from Italian queens mated by black drones. The latter may produce the quietest bees, but for real vigour and honey-gathering qualities there is much to recommend an English-Italian cross.

I am hoping to further test a few such colonies for honey production next season, and it will be interesting to see how much they score over the black stocks so often condemned.—A. H. Bowen, Coronation Road, Cheltenham.

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

Procuring Surplus.

(Continued from page 27.)

Having fitted the sections, they are next placed in the rack with a divider between each row of three. If the rack is kept level the sections and dividers persist in falling out of place. To avoid this put a long three-inch block of wood under the end nearest the manipulator so that the slope compels them to keep in position by their own weight (Fig. 51). With the rack (Fig. 24) be careful to see that the end stops at the bottom are at the highest point and the side one on the right-hand side.

Fig. 51.

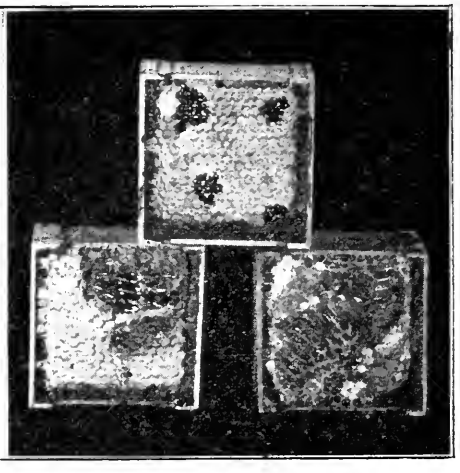


Fig. 52.

Commence to pack the sections in at the bottom left hand corner, otherwise the bee space in one row of sections at the side and end will be blocked and the bees be able to escape between the following boards. Place all the lock joints to the right hand. See that none of the ears of the dividers catch inside the sections; should this happen the divider will buckle and the bees will attach comb to it, as the bottom two (Fig. 52), or, as seen in the top one of the same illustration, they will make small pillars of wax from the capping to the dividers which pull off on the removal of the latter.

The following boards are placed in position and the spring blocks pushed in to hold them tight. These should not be placed parallel with the boards but at right angles to them. The wood of the block, and not the spring, should go against the following boards as they are not cleated, this helps to prevent them warping. The point of the spring should be at the top so that it pushes in and pulls out

without catching. (Fig. 53) shows the right way to place the spring block in position.

It is well to examine each rack after it has been occupied by bees for about three days, as even with the most careful work the foundation will sometimes fall or buckle, and, if allowed to remain, deformed and useless combs as the bottom five of (Fig. 54) will result; also at times, for some unexplained reason, the bees will build

FIG. 53.

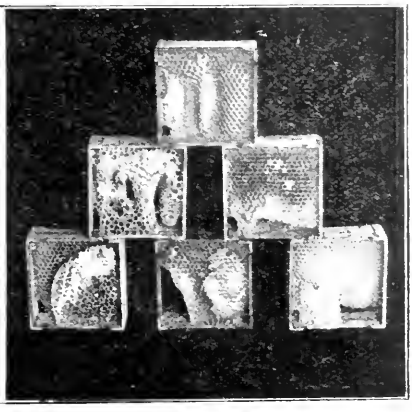


FIG. 54.

the comb all right on one side of the foundation but transverse on the other, as in the top one of the same illustration.

The use of an excluder is not absolutely necessary, but is advisable when working for sections: some seasons no harm will result from its absence, while in others many sections will be spoilt by brood, as (Fig. 55). If the excluder is objected to, a square

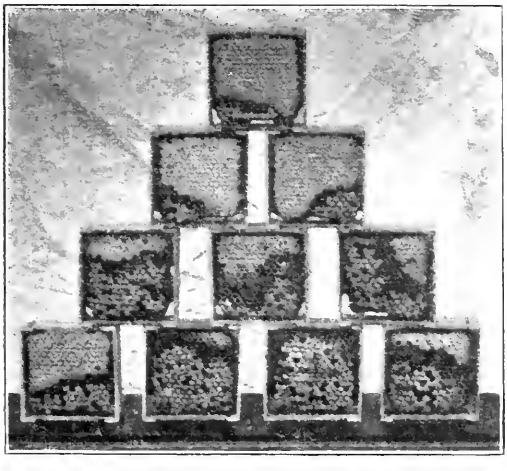


FIG. 55.

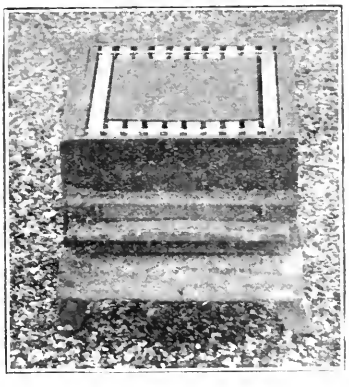


FIG. 56.

of American oilcloth cut so that it leaves a space of about 1½ inches round the outside edges for the bees to get up, may be placed over the brood chamber (Fig. 56); being over the centre of the brood nest the queen rarely goes up into the super.

Racks should always be put on so that the end following board is to the back of the hive and the side one on the right hand. If this is made a regular practice the bees will be confined to the sections and unable to build comb between the boards and side of rack (Fig. 57), which they will do if they are placed in opposite directions.

When building comb in sections the bees are divided up into separate clusters

(Fig. 58), therefore it is more difficult for them to maintain a sufficiently high temperature for the secretion of wax, so they must be assisted as much as possible

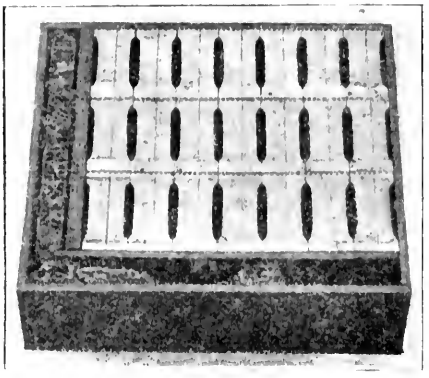


Fig. 57.

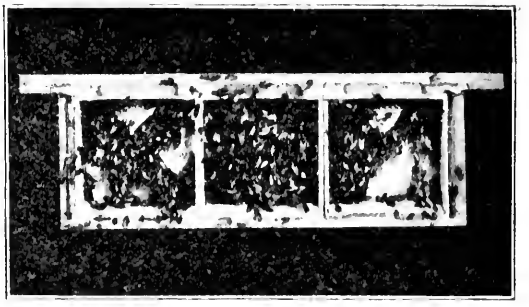


Fig. 58.

by crowding and wrapping down well. This is one reason why it is more difficult to prevent swarming when working for sections than extracted honey, less crowding being necessary in the latter case.

(*To be continued.*)

BLURTS FROM A SCRATCHY PEN.

CONTINENTAL WANDERINGS—LUCERNE.

Although, so might it be argued, Lucerne and its beauty have little to do with bee-keeping, yet I feel I may crave some little of licence. Certainly our "Continental wanderings" were in the main that we might see other apiaries, other ways of managing bee affairs. Yet if in the pursuit of our journeys other landscapes, other scenes enthralled us as indeed would they not all may I not endeavour, even if ever so feebly (for what word-painting of mine can shadow the reality?), to pass on some of our pleasure to your readers?

"The Lake of the Four Forest Cantons." I like best this title given to it by the German "Waldstättersee." It is a description. Dark and overwhelming in their heavy majesty, the forests billow down from where the line of the snow, and the rocks, naked, all but for the moss and the lichen, forbid their further upward spread. They break on the edge of this basin, hollowed out when some primeval upliftting formed the hills and the valleys, where Reuss, flowing northward, receives other mountain streams and broadens out. Not with a plain unbroken shore which easily might be measured with the eye. Bold promontories jut out, forming miniature bays in this land-locked sea. Of these bays there are four predominating in which, seen from the mountains above, the pious converts to Christianity recognised the shape of the Cross. The Bay of Wegger forms the eastern arm, as does that of Lucerne the west, Kursnacht being the north, and Hergiswell the south. Now the effect is that in voyaging from either end the scene is ever altering. A bold head of rock that one would almost seem to be running into is turned, another bay is entered and another panorama is sighted. And every hill, almost every rock, has its tradition, has some tale to tell. Over on the eastern side they point out the spot where Tell leapt ashore, and mark it with a chapel. It is said that Tell, a prisoner and bound, was being carried across the lake to the castle, but storm threatened, his guards released him that he might save them from wreck, and his gigantic strength enabled him to guide the boat to shore, where, swiftly leaping, he escaped. Yonder is Pilatus—the mountain with the cloud-capped head. Have you never heard the legend of its name? It is said to rest on a manuscript of his wife Claudia. Weak and infirm of purpose. He who could be bullied by a clamouring crowd to deliver a judgment against his own conviction was sure to meet misfortunes and rebuffs from his Roman masters. Disgraced from Judea, exiled from Rome, he wandered to the north of Gaul, and to Helvetia. In dark despair he threw himself into the lake yonder, just where it bends around the hill of his name. His body would not rest in the lake; it came ashore, and was buried in the lonely tarn on the moun-

tain's summit. Thus far says the manuscript. It were a pity to spoil the tale, but more probably the name originated from the head ever crowned with mist, and the Romans called it Pilcatus, *i.e.*, covered, as with a cap.

It is a glorious day of August. The sun and the blue sky drive away the gloom of the hills. The leaves are just past their summer and are beginning to change from green to grey. The little towns are gay with flags and hotel advertisements, for it is on the gold of the tourist that they exist. At each and every landing-stage our boat stops—again that commonplace idea of the Margate steamer distresses one—we wind and thread our way for a two and a half hours' journey. Half-way, high on a rocky cliff, bold against the sky, is a gigantic figure of the "Christus." Really one begins to feel there is something of truth in the legend, for beneath is the water deep, almost blue to black, showing the immense depth wherein the suicide cast himself. Another promontory turned, and we have Lucerne town in front of us, nestling under the shelter of its hills.

Lucerne—the city of history. Fought for, sacked, and conquered by repeated enemies. In the hands of Germans and Austrians, French and English. An university town, a home of music, painting, and sculpture. Oh! it was too bad. Again that imperative time prevented our stay. Just a glance at one or two of the masterpieces, its bridges, Kapellbrucke with the history of Switzerland, and Mücklenbrucke with its "Dance of Death," and that miracle of sculpture, Thorwalsden's dying lion. It tells how 26 officers and 760 men, the famous Swiss Guard at the Tuilleries in 1792, died sooner than break their promise. Just time to race around to these and to be off again; just enough seen to make a longing to return.—J. SMALLWOOD.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

HONEY JUDGING COMPETITIONS.

[9117] In reply to Arthur C. Pugh (page 29), I require no stalking-horse, nor am I a disappointed exhibitor grousing at the judge. I plainly stated that I was not an exhibitor in the wax class, where the most flagrant errors occurred; in the others I have experience enough to know that I was well beaten by better exhibits. An award would have given me no satisfaction, as I am not a pot hunter, but out for legitimate honours, and would far rather any exhibit of mine was passed over as unworthy of mention by a *practical* judge who thoroughly understands his work, than be awarded honours not due by one whose only claim to the post is theoretical knowledge, even if he has won numberless honey judging competitions.

His idea evidently is that a judge is a demi-god and should not be criticised. I am afraid our editors take the same view to a certain extent, and do not, as a rule, allow that play to the critics which I am sure, carried out in a friendly spirit, would tend to make the judges more efficient.

I am in entire agreement with him when he states that judges should have training and experience, and, as he says, the B.B.K.A. are always open to receive suggestions, may I make one?—*i.e.*, they should see that only capable and experienced men are appointed at such important shows as the Dairy, or they will dishearten and drive away exhibitors. Certainly the one last year lacked experience, as proved by Mr. Crawshaw's remarks, and, so far as I can ascertain, has never produced or exhibited honey or wax himself.

Mr. Pugh's contention that honey judging competitions are useful for training is not substantiated by the facts he so blithely gives. To quote him, "It has come to my knowledge since the competition that the second prize-winner has never kept bees, let alone exhibited." If my comparing them to a guessing competition in a block test is not a true one, how does he explain away the fact of this man beating Mr. Crawshaw, who is a judge of wide experience? I contend that these competitions are not of the slightest educational value, and will not serve the purpose for which they are supposed to be intended, any more than a bun and gingerbeer race will make either athletes of the competitors or increase their weight. If they are to be taken as a standard, will Mr. Pugh tell us how many prizes per person will constitute him a judge?

A great point is made of the fact that the competitors had to name the source from which the honey was obtained. Here again a guessing competition takes place, because any practical man knows that this can only be arrived at with

certainty by a microscopical examination of the pollen grains, to which method even the originators of the competition resorted rather than trust their own judgment. We are told in the BRITISH BEE JOURNAL, 1914, page 377, that five points will be awarded for each sample correctly described, and *further* marks for placing the winners.

The value (if any) of this as an education is annulled by the report, as no account is given of how many samples each competitor named correctly, a general summary being deemed sufficient. Will Mr. Pugh tell us the number of those *further* points, and if any competitor succeeded in naming more correct sources than did the winners?

The experienced judge awards the prizes to the best exhibit, irrespective of source, and I do not suppose for one moment that the B.B.K.A. or any other society intend to subdivide the honey classes beyond Light, Dark, Medium, Heather Blend, and Heather, as at present; therefore, where I ask is the value of this test, and if, as stated, the competition was intended to be as simple as possible, why introduce this complicated matter?

My point with regard to the objection to the method of tasting is entirely missed by your correspondent. That it is necessary for the judge to taste the exhibits to award the prizes is known to the veriest duffer, but how many judges know how to use the taster properly? I have watched a number of judges at work, and the only ones I have seen using the taster in the proper manner from honey to finger, as intended by its inventor, Mr. W. F. Reid, are Mr. T. W. Cowan, Mr. W. F. Reid, the late Mr. W. B. Carr, and the junior editor. The others dipped the taster—often a knife, lead pencil, or bone spoon—into the honey, and thence conveyed it direct to their mouth, and so on, from sample to sample. Even Mr. Pugh, if put upon his trial for this offence, would have to plead guilty, as my own observations prove. This method is reminiscent of the ale-house where six or eight tobacco chewing, expectorating, grimy individuals hand round a half gallon jug of beer from which each one drinks in turn, and is especially disgusting and loathsome when applied to a delicious, pure, and uncontaminated food given by Nature. I am always careful not to use for my own consumption honey that has been exhibited, not that I am a faddist, but because I realise, and wish to avoid, the unnecessary risk entailed. Imagine the danger to those partaking of honey dealt with in the above manner of getting infected by the germs of some malignant disease, such as phthisis, through the mouth, the readiest and most susceptible channel through which they pass to a new host.

That my objection to the honey competition on this ground has, contrary to your correspondent's statement, "a foundation," is proved to the hilt, for "it has come to my knowledge" through those in charge that with the exception of two out of about fifteen competitors all used the taster direct from honey to mouth.

If the B.B.K.A. wish to train judges, and I consider it is their duty to do so, let them drop these futile and foolish competitions, and, as suggested in my last letter, adopt the plan of classes with a qualified teacher. Also, why not invite or allow those desirous of learning to go one or two at a time with experienced judges when they are officiating so that they may be initiated into the art and practice of judging?

AN EXHIBITOR FOR THIRTY YEARS.

[We would point out to our correspondent that the B.D.F.A. appoint the judges at the Dairy Show and not the B.B.K.A.—EDS.]

THE HAYES DENSIMETER.

[9118] Seeing the diagram and reading the remarks of the inventor, I feel sure it will be encouraging to Mr. Pugh for the lecture he gave on "Honey Judging" at the meeting of the B.B.K.A. in October, 1913, as it proves that all he said did not fall upon deaf ears. Having read the description and instructions for use of the "Densimeter," I fully appreciate the efforts of Mr. Hayes in devising such an instrument for testing the "density," "viscosity," or "gravity" of honey put on the show bench. There are one or two questions I wish to ask. Of what kind of material is it made? and what is the weight?—as upon this to a great extent will depend its practicability.

In judging honey for the last twenty years I have always tested the "density" by measurement.

I have seen samples of honey with a lovely amber colour, and for brightness all one could wish for, with aroma good, flavour delicious, and when inverted the air bubble of the slowest movement, but when it came to the final test of measurement it had to take a back seat, for being in the first stage of granulation made it brittle instead of elastic.

I should be pleased to hear from those judges who have seen the "Densimeter" what they think will be the result in

cases where granulation has just set in. —J. S. LAWTON, Bridgnorth.

[We may say the "Densimeter" is made of a glass tube weighted with quicksilver, the whole weighing ¼oz. A judge who knew his work would not use a "densimeter," or anything else, on honey that has commenced to granulate if shown in a class for clear honey. Our correspondent's reference to *measuring* density is rather vague. The method of inverting a jar of honey and judging the density by the speed at which the bubble rises is unreliable and out of date. The size of the air space at the top of the jar makes so much difference.—EDS.]

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

W. (St. Ives). *Rate for Sending Honey by Train.*—We have made inquiries at the offices of the G.E.R. Co., and they inform us that honey may be sent at the "owner's risk rate," which is half the ordinary parcels rate, but is not accepted at the special rate for "Farm and Market Garden Produce," which is again a little more than half the "owner's risk" rate. In your friend's case, therefore, the stationmaster has made a mistake, or the contents of the package were not stated to be honey. We would warn our readers that there are penalties for making a false declaration as to the contents of packages for the purpose of obtaining a lower rate of carriage. These particulars probably apply to other railway companies as well as the Great Eastern.

C. H. T. (Huntingdon).— *Value of Wax Extractor.*—If well made in a workmanlike manner it is worth about 30s. The sections should make from 1s. to 1s. 3d. retail and from 10s. to 11s. per doz. wholesale.

T. C. BEAUCHAMP (Ontario). *Suitable Hive for Canada.*—Yes, the W.B.C. hive is suitable. We know several bee-keepers out there who use them with success. It would take up too much of our space to give you full details. You will find them in the "Guide Book," or if you get the "Practical Note-book" you will find in it full instructions for making the W.B.C. hive. The usual method of spacing the frames is to use the W.B.C. metal end. The brood frames are 14in. long, 8½in. deep, the top bar is 17in. long, ½in. or ⅝in. thick, and ⅞in. wide.

E. M. K. (Parkstone).—They would probably be all right, but frames cost so little compared with the risk that it is better and safer to get new ones.

NOVICE (Crawley).—You could rear the queens from the two stocks, but the possibility of keeping them pure is very remote. We advise you not to use the queen excluder over the entrances; it would hinder the bees too much, and would not serve the purpose, as there are probably a number of stocks of bees within a radius of a couple or three miles of you. A better plan is to get one colony to breed drones early, so that they are flying before those from other hives; follow the instructions given in "Guide Book" on queen rearing, pages 123-132 and 200. Queen rearing will pay if carried out on proper lines, but with all precautions you will not be able to prevent a foreign race interbreeding with natives and becoming crossed. The hive bee does not work on the red clover, unless for some reason the flower heads are smaller than usual.

MISS N. M. B. (Hastings).—(1) As early as possible. You may perhaps be able to get one early in May. (2) You cannot purchase a *swarm* now. Feed for a few days whenever you get it, and keep on feeding if the weather should turn unfavourable. (3) Natives. (4) Yes.

Suspected Disease.

A. B. (Wolverhampton), J. G. (Pitshill), E. B. (Ross-on-Wye).—It is "Isle of Wight" disease.

MISS MORGAN (Brentwood).—The bees have died of starvation. They have probably clustered in a part of the hive where there was very little food, and when that was consumed have been too torpid to move to the combs containing more stores.

MISS M. B. (Hanworth).—The bees are suffering from "Isle of Wight" disease. We should be pleased if some of our readers who *have* got the correct instructions would pack specimens as well as you have done.

A. J. (Ballindallock).—There was no brood of any kind in the comb. The bees have died from "Isle of Wight" disease.

ROYAL SHOW FUND.

	£ s. d.
Donations already received ...	24 19 0

WAR RELIEF FUNDS.

Donations already received ...	3 16 0

WEATHER REPORT.

WESTBOURNE, SUSSEX.

January, 1915.

Rainfall, 4.85in.	Minimum on grass, 20, on 19th.
Above aver., 2.29in.	Frosty nights, 11.
Heaviest fall, .87 on 6th.	Mean maximum, 43.8.
Rain fell on 21 days.	Mean minimum, 35.6.
Sunshine, 38.2 hrs.	Mean temperature, 39.7.
Below aver., 26.1 hrs.	Above average, 1.7.
Brightest day, 17th, 5.6 hrs.	Maximum barometer 30.507, on 19th.
Sunless days, 11.	Minimum barometer, 28.794, on 3rd.
Maximum temperature, 53, on 13th.	
Minimum temperature, 27, on 30th.	L. B. BIRKETT.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 6s. *per inch.*

PRIVATE ADVERTISEMENTS.

WAX EXTRACTOR. Lee, No. 56, 7s. 6d; honey ripener, Lee, No. 54, to hold 1 cwt., 10s.; Cottage do., capacity over 70lbs., 6s.; Lee, No. 54a, 6s.; lamp and hot can for uncapping, Lee 75, 3s.; all in nice condition; also several dozen wired shallow frames, drone or brood foundation; full sheets in crates of nine or ten, 4s. 9d. per doz; crate, 1s.—"ZETA," BEE JOURNAL, 23, Bedford-st., W.C.

HONEY, light, good quality; 4 cwts. in 28lb. tins; 60s. per cwt., on rail, empties returnable. Sample, 3d.—F. PEPPER, Holywell Row, Mildenhall, Suffolk.

FOR SALE. Four stocks of bees in Taylor's hives, all two years, from Scotland, and free from disease. Also all appliances, including: 1 new hive (Taylor), large honey extractor (Taylor), 80 1lb. honey jars with screw tops, many drawn out combs and sundry foundation, 4 queen excluders, 4 feeding bottles, sundry frames, lifts and wax. Price £12; inspection invited.—Apply, E. W. WOOD, The Stone House, Frindsbury, Rochester, Kent. v 46

SALE. First grade clover and spring blossom honey, 54s. cwt., 28lb. and 14lb. tins at same rate, free on rail, sample 3d. The Priory, Colwick, Stafford. v 44

2½ CWTS. good granulated honey, £6 10s. Cash with order, carriage forward. Sample, 3d.—A. LEE, Eastleigh, Bideford, Devon. v 42

11 DOZEN SECTIONS, good clover honey, 8s. per dozen. Carriage paid. Sample free.—IRVING, Armathwaite, Carlisle. v 41

BEST laying and table fowl, White Wyandottes; trap-nested strain. Sittings, 4s.; with broody hen, 8s.—BROWN, 20, Temple-st., Wolverhampton. v 46

THREE 28lb. tins of pure honey at 6½d. lb. Good colour and flavour. — MILES PARTRIGE, Cannock, Staffs. v 45

PURE Leicestershire honey, light, excellent quality, 28lb. tins, 16s. each; sample, three stamps.—E. EVERETT, expert, Rosebank Apiary, 40, Linden-street, North Evington, Leicester. v 39

WANTED, bees, in straw skeps preferred.—State price to LARKIN, Wooburn, Bucks. v 38

COMPLETE apairy of 5 stocks.—Particulars of C. HANKIN, "Chimhams," Farningham, Kent. v 37

PURE English honey (light), 28lb. tins 65s. per cwt.; also pure English Beeswax, 1s. 3d. per lb.; samples, 3d.—J. YOUNGER, 29, Newmarket-road, Cambridge. v 35

OFFERS wanted, quantity Westmorland heather honey, 1st grade sections.—BOUSFIELD, Woodbine Cottage, Hartley, Kirkby Stephen. v 33

FOR SALE, three 28lb. tins honey, 14s. per tin; also three dozen well filled sections, 7s. 6d. per dozen, free on rail.—SEMMONS, Leiston, Suffolk. v 30

FOR SALE, seven 28lb. tins of finest light honey, 15s. each; also six dozen excellent heather blend, 1lb. screw bottles, 9s. dozen; sample, 2d.; cash with order, f.o.r.—GORING, Heath Hayes, Cannock. v 29

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, or exchange, ice safe, 21in. long, 20in. deep, and 16in. wide, wants slight repairs, 10s.; too cheap for approval.—BUMBLE, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, ½ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

SELL or exchange, good dress suit, 36in. chest, 20s.—DRESS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a complete comb of both a bad and mild case of Foul Brood.—HERROD, "B.B.J." Office.

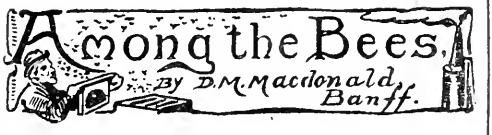
OBITUARY NOTICES.

MRS. REID AND MRS. PUGH.

We are sorry to have to announce the death after prolonged suffering of Mrs. Reid, the wife of Mr. W. F. Reid, vice-chairman of the B.B.K.A. Also of Mrs. Pugh, the wife of Mr. A. G. Pugh, of Beeston, one of the council of the B.B.K.A., who passed away last Friday after a long illness. We are sure our readers will join with us in tendering our sincerest sympathy to Mr. Reid and Mr. Pugh in their bereavement.

THE "BEE JOURNAL" TO "THE FRONT."

In response to Mr. L. Kettle's appeal for copies of the BRITISH BEE JOURNAL in our issue for last week, we have received the following letter from the Rev. D. Lloyd Jones:—"*Re* L. Kettle in to-day's BRITISH BEE JOURNAL. I am sending him the issues of 4th and 11th, and shall be pleased to send the B.B.J. weekly in future.—REV. D. LLOYD JONES."



Comb Honey.—In a season like the present, when sales have been sluggish, great care should be taken to preserve sections from granulating. Perhaps the caution comes too late, because once incipient candying sets in the little leaven quickly leavens the whole. Precautions should really be taken as soon as the honey is off the hives. Each section should be carefully cleaned and wrapped closely in waxed paper, then they should be parcelled in threes or sixes, or any other number to suit the receptacle, and bound up in brown paper parcels. These should be placed in biscuit or other tins, which should be hermetically sealed by pasting strips of gummed paper all round the lid joints. Wherever salt keeps well honey stands a good chance of remaining uncandied. A kitchen cupboard near the fire is the best place wherein to store the tins, because there they will not have to stand very great variations of temperature. Successive rises and falls and excesses of heat and cold do more than even a continuous cold to generate granulation in comb honey. Failing a situation similar to that recommended above, some have advised its being stored in the attics of the house. In either place I have known it come out in May or June quite uncandied, and with the flavour almost equal to that newly taken off the hive.

A Smoker Plug.—This subject has apparently interested a good many readers, most of whom highly commend its use. None of them refer to troubles similar to the Capper's captious criticism. Mr. A. Low (Aberdeen) offers a useful hint: "I can testify to the efficiency derived from having a cork, as I sometimes keep the smoker alight for several hours with one charge. I usually use old and rotten sacking. Get a small piece well alight, then cram the smoker full, and work the bellows until a white smoke appears. When not in use, if it is set on end with the cork placed tightly in the opening, it will keep smouldering until one is ready to use it again at a moment's notice. Instead of attaching it with a piece of string, I made a loop the size of the cork and fixed it to the bracket which holds the fuel box, where it is out of the way and always ready. The ring handle for lifting the lid could be made the exact size of the nozzle, and then the cork would fit either. This is for a Root smoker, which I generally use, but the more common Bingham could be easily fitted with a similar contrivance. A troublesome smoker is one of the most irritating things which go to mar the pleasures of manipulation, and convert the joys of bee-keeping into a trouble and vexation. A device to make a charge long-lived will do more than anything else to make the manipulator the bees' master."

Restarting.—Considerable interest has also been shown in this subject, perhaps naturally, owing to the number of bee-keepers who were cleared out by the ravages of disease during recent years. Two points stand out prominently in inquiries I have received—How I procured the bees? What value I set on Italians as disease resisters? In regard to the first I went to regions far apart from where "I.O.W." had penetrated, and to inland glens where disease hitherto has been quite unknown. In each case the bees were discovered to be strong breeders, and in the past they proved excellent swarmers. Increase naturally would be the chief desire. The bees are blacks, or about as black as they are

to be found nowadays. Past experience has taught me to avoid Italians. They are *soft* and short-lived in our northern climes, and for heather honey production in sections they are altogether unsuitable. The point made by several correspondents is whether they are not immune from disease. This is mere fiction. From the undoubted higher fecundity of their queens they keep up the delusion for a time that they are better resisters of disease, but the owner is soon disillusioned. A friend with over 100 hives held stoutly that opinion. Recently he wrote me that when they had been fairly infected they went under even quicker than his black bees. In his restart he will have nothing to do with even the taint of Italian blood.

Number of Racks.—In visiting an Aberdeenshire bee-keeper possessing nearly 100 hives in the early days of last season I was surprised to discover that he had only one, or at most two, racks on even his strongest hives, nor did he mean to add more. I urged him strongly to place an extra one on each of his best, but he protested that if he did so, should the weather break, he would lose more than he would gain. At the time I had only one on my strongest, a swarm of the current season, but on returning home I placed a second above, which was taken to immediately. Very soon after a third was added above the other two, and about the 20th, on again leaving home, a fourth was added, again above the others, while No. 1 was withdrawn completed. Bees must have taken to No. 4 at an early date after it was given, and had I been at home during the first week of September a fifth rack would have been supplied. As it was, I secured eighty-six beautifully finished sections, every cell capped. The season was excellent and prolonged, which accounts for above returns. But my point is, add racks on the chance of their being appropriated by the bees, even before there is a need for them if the weather is at all good and the flow promising. If your bees require additional storage room they will use it; if not no harm is done, and they will leave it severely alone, but it is a dead loss to leave them with scant storage room.

RANDOM JOTTINGS.

By Charles H. Heap, Reading.

BEES AND BLOSSOM FERTILIZATION.

At the last conversazione of the British Bee-keepers' Association one of the discussions turned upon the value of bees in the fertilization of the blossoms of hardy fruit trees. I ventured to mention as an instance of their value that in a certain Berkshire village, the bees having been destroyed by disease, the apple crop last season was a failure, but by one of those unfortunate accidents which at times happen in every printing office, two sentences of mine were omitted and some words of another speaker, who took an entirely opposite view, were attributed to me. I can guess how the mistake was made, and I should not allude to it, except that some day, if I do not make the correction, views which I do not hold and did not express may be brought up in evidence against me. In the autumn of 1913, during a tour in north Berkshire, I was able to tell by the absence of fruit on the trees where all the bees had died. At the conversazione one gentleman from Kent said that the bees had little or no influence upon the strawberry crops, but I have since called to mind a case in which strawberries could not be successfully grown in the garden of a large house, also in the county of Berks., until a new gardener was engaged. He took to the place three or four hives of bees, and that year the family had a surfeit of beautiful berries. Of course, one swallow does not make a summer, but this case is, to say the least, interesting.

"WILD COLONIES" AND DISEASE.

There are two points in Mr. Crawshaw's article in the BRITISH BEE JOURNAL of Jan. 28th upon which I have something to say. He seems adroitly to suggest that I hold the opinion that the combs of a stock which has died from microsporidiosis are free from danger. As a matter of fact, I regard them as being very dangerous, but the main thing is that Mr. Crawshaw has failed to show that the so-called "wild colonies" are an insuperable difficulty to stamping out disease. Mr. Hopkins's testimony from New Zealand may be commended to Mr. Crawshaw's notice.

"ISLE OF WIGHT" DISEASE NOT A SUBJECT FOR JEST.

I always feel that microsporidiosis is too serious a disease to make the subject of jest, and Mr. Crawshaw must forgive me if I failed to notice that he was joking in his reference to "Mr. Heap's microbe." The reference was not so clear as he imagines; indeed, I think he associated in his mind the remark of another correspondent with me.

MR. CRAWSHAW'S CHALLENGE.

In the same article Mr. Crawshaw throws down the gauntlet, which I readily pick up. He says I "speak glibly enough" of compulsory power to deal with bee diseases, and asks, "but how is it to be obtained in the face of organised opposition?" Not by showing the white

feather, but by fighting the few organised opponents by organising the thousands of bee-keepers in favour of legislation. That is my explanation. Mr. Crawshaw further says that in working for legislation he cannot trace having received any support whatever from me. Well, I cannot trace having been invited by Mr. Crawshaw to assist him in a task which apparently was too much for him! If Mr. Crawshaw will turn over the pages of the BRITISH BEE JOURNAL for the past two or three years he will find that, without invitation from anybody, I have done my best to keep the minds of bee-keepers on the main point by combating fallacies, and Mr. Crawshaw will find that he has never lost an opportunity of trying to belittle my efforts.

ITALIAN BEES AND DISEASE.

A few months ago Mr. Wesley Foster, writing in "Gleanings in Bee Culture," described the symptoms accompanying the death of a large number of bees in Colorado. These symptoms coincide exactly with those with which many of us are familiar in cases of "Isle of Wight" disease. Mr. Foster attributed the mortality to poisoning, and there has since appeared in the same journal, on Jan. 1st, a leading article, seeking to back up Mr. Foster's view. The statements put forward in this editorial by no means constitute a chain of evidence in support of the poisoning theory, and the most obvious method of getting near the truth has apparently not been adopted. Time will, of course, reveal the truth. Our bee-keepers obstinately stuck to the poisoning explanation for years, and some adhere to it still. Apart, however, from Mr. Foster's article, I have seen various statements respecting the mysterious deaths of bees, which tend to show that the United States has the nosema apis trouble. Our Board of Agriculture's investigators suggested as much three years ago. The queen breeders of America have exploited the Italian bee for all it is worth and a great deal more for many years, and Mr. Wesley Foster's article of last November should make the yellow bee fanciers pause to think. There has been abundant proof in this country that the Italian bee is just as liable to be attacked by "Isle of Wight" disease as the native black. I have seen many cases myself. Last autumn the only cases of the disease I found in one neighbourhood of a northern district were in two apiaries into which Italian bees had been introduced. A third apiary, in which the bee-keeper failed to introduce his Italians, showed at the time of my visit no signs of the disease. The three apiaries were a long way apart, and the queens were all obtained from the same breeder.

BEE-KEEPING AND SUNDRIES.

The question often arises—which is the best kind of hive to buy?

Well, now, I should say that the "W.B.C." hive is undoubtedly the best one on the market. But it has its weak points.

Its cost, 25s., together with carriage, and three or four coats of paint—an absolute necessity if we expect our hive to last a lifetime—make quite a hole in 30s.

Then, again, its lift, instead of being reversible or telescopic, raises the hive too high to resist the winter storms, or, indeed, those little whirlwinds we so often get in spring. It is also rather clumsy to move to clover fields by road or rail.

I think a "hybrid" hive on the "W.B.C." plan would be a capital institution.

Let it have its usual good sound floor-board, with or without legs, and the moveable interior; no porch, but a deep telescopic lift, and last of all a capacious roof with a flat top, slightly sloping from front to back.

But I must hark back to the line of "which is the best hive," or our hunts-man will be drafting me out of the pack as a babbler and skirter.

It is better to have the frames at right angles rather than parallel to the entrance, because the bees have then quick access to all the frames, and the interior might be cooler in hot weather.

There is a great deal to be said in favour of a simple hive, consisting only of a floor-board, 10-frame body, deep telescopic lift, and flat roof, because you then get the maximum of room and efficiency, with but few parts to handle and keep in repair, and no ornaments to worry. Most people enjoy hammering nails into wood. I do, too, but do not enjoy sawing, though I make most of my own hives.

You can make elaborate mansions for bees from sugar or quaker-oat boxes, which answer fairly well, because bees will flourish in any box providing they are warm and have plenty to eat.

But to the old and experienced hand such hives are an eye-sore.

Beautiful wood planed and sawn accurately by machinery can be had so reasonably that it is better for the bee-man with a love for carpentry to fix upon a good hive as a pattern, buy his wood cut to measurements; and fix it together himself.

If any amateur has tried to saw up wood for a bee-hive, he will find it almost impossible to hold the saw quite perpendicular, so as to get the saw cut exactly at right angles to the board. When the saw is not held true the roughly-cut edge will make quite a sad difference to the hang of a hive, and may

even spoil it for practical purposes altogether. It is much better, therefore, to buy your wood accurately cut, and so make sure of a good fit all round.

There is also an advantage in being able to "cut your coat according to the cloth"; or, in other words, to construct a hive suited to one's individual means.—A. H. Bowen, Coronation Road, Cheltenham.

I have been asked whether my offer to send packets of white and yellow American sweet clover on receipt of stamps for postage is still open.

Yes, friends, send along your requests, and I will attend to them as they come to hand. This capital honey plant was a great attraction to the bees last summer, and the blossoms seeded plentifully, no doubt owing to the efficient fertilisation they received.

ROSS-SHIRE NOTES.

The season of 1914 was a favourable one here so far as concerns surplus honey. Clover, scarcely an average crop, was supplemented by heather, with the result that excellent yields of honey were obtained. Brood-chambers are heavily stored as well, and no feeding is required—a great consideration in these days of dear sugar. Honey alone among food products was adversely affected by the war, and personally I had the greatest difficulty in finding a market. The outbreak of hostilities spoilt the tourist season in the North, which meant one market lost, while, on the other hand, private customers, when approached for their usual order, appeared to regard honey as a luxury that could be dispensed with in war time.

THE BETTER BEE.

I have had large crops of honey from Italians, but during recent years, while working five different races of bees in my apiary, Carniolans have been consistently in the lead. A yield of well over 100 sections and increase as well during two consecutive seasons is highly satisfactory, and but for its swarming propensities this would be the ideal bee.

My experience with Carniolans is that swarming should be anticipated by dividing previous to putting on the section racks.

This is distinctly preferable to the upset caused by applying control methods to a swarming outbreak at the height of the honey flow. Carniolans resent cramping, and must be supered in good time, but instead of section racks an extra 9in. brood-box with wired foundation is put on when clover appears. This gives ample room until the honey flow is fairly started. When the bees are seen drawing out new combs, remove their original brood-chamber to a stand alongside, shaking most of the bees and the queen on to the new combs, and then supering. The removed portion is requeened and a week or so later moved to a new stand, thus giving the parent colony a fresh accession of flying bees.

This procedure usually stops swarming, and without affecting the yield of honey, while the young queen can be relied on to build up an ideal stock for the heather.

NON-STANDARD FRAMES.

My first experiment in this line was with massive Quinby size brood-frames, 18in. by 12in. in measurement and twelve in number. With a prolific Italian queen in charge this particular colony became almost incredibly populous, and so far as clover honey surplus was concerned easily outstripped all my other stocks. But when the days came for the last stand "owre the muir among the heather" very little surplus honey was stored above those large deep frames. For this reason alone I laid aside my one large hive, but may resurrect it again if only for the pleasure of seeing once more those massive slabs of brood, and again watching that enormous population at work when the days come for honey gathering.

FINIS.

Here endeth Ross-shire Notes—at least, so far as the present writer is concerned. My new home is to be in Dumfriesshire, near Gretna Green, and eleven miles from Carlisle. Although the district appears an ideal one for bees, apiaries are few and far between. In fact, I could find only two bee-keepers and twelve colonies of bees within a radius of several miles. However, I shall be only 2½ miles from Cumberland and may get in touch with some British Bee Journal reader on the English side of the River Sark.

The opening days of March will see me engaged in my first experience of migratory bee-keeping, and 'tis a long long way from Ussie Valley to the head of the Solway Firth. The first stage is on the Highland line to Perth, the second by the Caledonian to Carlisle, and the last a short run on the G. and S.W. Railway to Gretna. I intend sending the hives and supers in advance by goods train, and taking the bees along in travelling boxes under my own charge. Even with all possible precautions it is doubtful whether the 300 miles journey can be negotiated without some "episodes," which may be told in the British Bee Journal later on.—J. M. Ellis, Ussie Valley.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

HONEY JUDGING COMPETITIONS.

[9119] I am pleased to note the question of the utility, or otherwise, of honey judging competitions is now being discussed in these columns. In my opinion the question of training judges is one of vital importance to the future of bee-keeping, and any effort made to provide education in this respect is to be commended.

All agree that we have now a number of very efficient men, who have done, and are doing, yeoman service for the craft, but we cannot expect to continue to have the benefit of their experience as time goes on. The years keep rolling by; apiculture is rapidly developing; competition at the shows is getting keener, due to the rank and file becoming more educated in the requirements of the show bench, and to the influence of the instruction imparted by the parent and county associations. This state of affairs demands a higher standard of efficiency on the part of the judges, yet nothing is being done to ensure that in the future there will be a sufficient supply of capable judges. There is no school at which those aspiring to the rank can obtain instruction in the art; there is no organisation in existence which can assist the ordinary bee-keeper to obtain this qualification, and unless individual students are prepared to collect samples of honey from various parts of the country, and undergo a course of private tuition, there is little chance of any real success being attained.

The majority of bee-keepers of experience, if called upon to judge, say, at the Grocers' or the Dairy Show, where exhibits from all parts of the country are in competition, would, I venture to say, be somewhat "at sea," and I am certain that if they were asked to designate the source from which the majority of the exhibits were derived there would be no uniformity of opinion. Proof of this will be found from the result of the recent competition. It is not to be expected that bee-keepers with but local experience will be able always to recognise individual samples of honey from widely separated districts. Many of these persons possess the aptitude, but need the necessary instruction and general experience. As time goes on there is little doubt that even higher standards of efficiency and more uniform ideals will be demanded than those which obtain at the present time.

It is well known by exhibitors that certain judges favour certain grades of honey, and as it is obviously impossible to fix "standards" for particular grades or classes the personal element, at times, is very much in evidence. If some plan could be adopted making it possible to train judges under a uniform system, this defect would, in time, be very much reduced.

Those of us who are thirsting for instruction look naturally to the B.B.K.A. to provide the necessary facilities. It would certainly tend to promote the "encouragement, improvement, and advancement of bee culture in the United Kingdom," and I feel certain that if an annual course of instruction could be given it could be made self supporting.

We junior members of the craft appreciate to the full the motive which inspired Mr. Pugh and the Committee of the B.B.K.A. in organising the last competition, our only regret being that the want of instruction made the results appear as so much guesswork. A wide range of experience is required to be able to designate correctly the sources from which particular samples are derived, especially if blended, or mixtures.

The competition has shown clearly that what is needed is instruction first and examination afterwards, and, as I suggested at the Council meeting in October last, I hope that it will be found possible to organise a short course of instruction in practical honey judging, &c., during the coming year, under a competent instructor appointed for the purpose, to be followed by a competition somewhat on the lines of the last.—GEO. W. JUDGE.

JUDGES AND HONEY.

A CHELTONIAN'S VIEW.

[9120] "An Exhibitor for Thirty Years" does well to strike out strongly on the vexed question of judging. It takes a capable pen to champion the cause of the long-suffering exhibitor, who in the words of a well-known author "is a right good fellow, but willing and anxious to learn." The question often is whether those who propose to teach know very much more about the matter than the skilled exhibitor himself. The fact that he is a regular prize-winner in all the well contested classes at our biggest shows proves him

to be a good and capable bee-keeper, and one who knows the points of good honey, and how to preserve them.

Now, my idea is that when new judges are needed these are the men capable of giving satisfaction, and the ones that should be asked to officiate.

It seems to me what we want more than anything is practical judges, or, indeed, practice before theory in every phase of bee culture.

A man who can talk till "all's blue" on such subjects as "How far can a bee see," may be utterly incapable when up against a difficulty requiring definite and extensive practical knowledge. Therefore, I say let the skilled prize-winners of to-day be the new judges of to-morrow, and the exhibiting section of bee-keepers will no doubt be better satisfied all round.—A. H. Bowen, Cheltenham.

J. P. Wells (Portsmouth).—(1) and (2) The queen is a virgin, and has been stung to death: the sting is still in her abdomen. (3) We cannot say, but it is very unusual. They will probably raise another later on. We trust you will return safe and well.

P.C.P.L.—The probability is that the bees swarmed again unknown to you and decamped.

Suspected Disease.

C. Spiller (Cardiff), W. D. K. (Cardiff), B. B. (N. Anston), W. A. B. (Croydon).—It is "Isle of Wight" disease.

Amateur (Harborne).—It is "Isle of Wight" disease. We have not received the other box.

T. P. (Anglesey).—Nos. 1 and 2 were too dry for diagnosis, but the symptoms point to "Isle of Wight" disease. No. 3 have died from "Isle of Wight" disease. (*b*) The honey may be used for consumption, but do not let bees have access to it. (*c*) It is best to melt the combs down and burn the frames. (*d*) The hives may be disinfected by scorching the inside with a painter's lamp. Wash and paint the outside. (*e*) There is very little you can do. Lime and, if possible, dig the ground round where the infected stocks stood; keep some disinfectant in the hives; medicate any food given with quinine, and when the bees are flying see that the water supply is kept clean and uncontaminated by dead bees or excrement.

C. E. (Sedgley).—It may not be alone, but it is in conjunction with other symptoms.

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Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼in., *or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS.

FINE light honey, in 28lb. tins, 7d. lb.; sample, 3d.—WAIN, Thorpe Bank, Wainfleet.

FOR SALE, six large hives, excellent condition, lot of appliances, cheap; list sent.—WARD, "Woodside," Hawkhurst, Kent. v 50

FOR SALE, three fine healthy stocks young queens; also three complete hives with all appurtenances; a fine chance for any one wishing to start bee-keeping; may be sold separately.—MRS. RUSSELL, Redlands, Bearsden, Dumbartonshire. v 49

28 LBS. choice Hampshire honey, 16s., tin free.—ARCHER, Anton-road, Andover. v 51

WANTED, secondhand, heather press, Sladen queen-rearing appliances, Brice's swarm appliances, quantity iron shoes for hives, metal runners, Porter's bee escapes, drinking fountains, brass cones, wax smelter, introducing cages.—FORD, bookseller, Chesterfield.

SALE. First grade clover and spring blossom honey, 54s. cwt., 28lb. and 14lb. tins at same rate, free on rail, sample 3d.—The Priory, Colwich, Stafford. v 44

2½ CWTS. good granulated honey, £6 10s. Cash with order, carriage forward. Sample, 3d.—A. LEE, Eastleigh, Bideford, Devon. v 42

11 DOZEN SECTIONS, good clover honey, 8s. per dozen. Carriage paid. Sample free.—IRVING, Armathwaite, Carlisle. v 41

BEST laying and table fowl, White Wyandottes; trap-nested strain. Sittings, 4s.; with broody hen, 8s.—BROWN, 20, Temple-st., Wolverhampton. v 46

WANTED, bees, in straw skeps preferred.—State price to LARKIN, Wooburn, Bucks. v 38

PURE English honey (light), 28lb. tins 65s. per cwt.; also pure English Beeswax, 1s. 3d. per lb.; samples, 3d.—J. YOUNGER, 29, Newmarket-road, Cambridge. v 35

OFFERS wanted, quantity Westmorland heather honey, 1st grade sections.—BOUSFIELD, Woodbine Cottage, Hartley, Kirkby Stephen. v 33

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, or exchange, ice safe, 21in. long, 20in. deep, and 16in. wide, wants slight repairs, 10s.; too cheap for approval.—BUMBLE, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

ACCIDENT INSURANCE.

We are making arrangements with the well known General Accident, Fire and Life Assurance Corporation, Ltd., to insure our readers against fatal railway accidents. We hope to publish full particulars and coupon next week.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, February 18th, 1915. Mr. E. Watson presided, and there were also present, Messrs. R. H. Attenborough, J. Smallwood, O. R. Frankenstein; Association representatives: A. Willmott (Hertford and Ware), J. P. Phillips (Worcester), G. J. Flashman (Barnet), G. S. Faunch (Essex), G. Bryden and J. W. Judge (Crayford), F. W. Harper (St. Albans), and the Secretary, W. Herrod-Hempsall.

A vote of condolence was passed to Mr. W. F. Reid and Mr. A. G. Pugh on the loss of their wives, and the secretary was instructed to communicate the same to both gentlemen.

Letters expressing regret at inability to attend were read from Miss M. D. Sillar, Messrs. T. W. Cowan, W. F. Reid, A. G. Pugh, C. L. M. Eales, T. Bevan, E. Walker, A. Richards, and Rev. F. S. F. Jannings.

The minutes of Council meeting held January 21st were read and confirmed.

The following new members were elected: Mrs. A. G. Newton, Mr. G. Richings.

The following Associations nominated representatives to the Council, and they were accepted: Herefordshire, the Hon. Mrs. Wilmot; Glamorganshire, Mr. F. Gravil.

The financial statement was made by Mr. Smallwood as follows: Payments into the bank for January £28 19s. 10d.; the bank balance being £214 17s. 11d.; payments amounting to £5 1s. 6d. were passed.

The final examination was arranged for May 28th and 29th.

It was proposed by Mr. Faunch and seconded by Mr. Bryden that the report and balance-sheet as read be passed and printed.

Mr. Smallwood proposed and Mr. Faunch seconded that a hearty vote of thanks be given to Mr. W. S. Dawson for kindly auditing and signing the balance-sheet for 1914 gratuitously.

Arrangements were made for the Annual Meeting and Conversazione to be held on March 18th, 1915. Mr. G. Hayes to be asked to give a paper on "Pollen, with special reference to its Separation from Honey and Preparation for the Microscope"; failing him Mr. Flashman, sen., be asked to give a paper on "Wild Bees." Failing both the Secretary promised to give an illustrated lecture on "Queen Rearing."

During the afternoon Mr. J. W. Moir had presented himself to lecture before the Examining Board for the Final Certificate, and upon Mr. J. B. Lamb's report it was resolved to grant it.

Next meeting of Council, March 18th.

TWO OF EUROPE'S MOST NOTED APIARISTS.

Mr. E. P. Dadant has kindly sent us the following copy of a paper read by him at a meeting of the United States National Bee-Keepers' Association at Denver on February 17th, 1915:—

Since I have lately made a protracted visit to Europe I have been expected, at Bee-keepers' Conventions, to bring information concerning European bee culture. But our president has slightly changed my programme this time, by asking me to speak of some of the most capable bee-keepers of modern Europe. The subjects I have chosen are Thomas Wm. Cowan, of England, and Edward Bertrand, of Switzerland.

Mr. Cowan is one of the best known bee students, and perhaps the best posted in the entire world. For forty years chairman of the British Bee-keepers' Association, editor of the BRITISH BEE JOURNAL, which has now entered the 42nd year of its existence, and is the only weekly bee magazine published at present, Mr. Cowan is a man of most extraordinary attainments.

He is now seventy-five years old. He and his wife celebrated their golden wedding on May 19th, 1914. His home is at Taunton, England. But he spent a number of years with his wife and his son in California, and at different times spent the summer in Switzerland. He has been very fond of travel. When a discussion arose concerning the so-called "Punic Bees" of Tunis, claimed to be an entirely different race from the common *Apis mellifica*, and called by some *Apis nigra*, he made a trip to Africa and ascertained that the bees of Tunis and Algeria differed little, if any, from the above-mentioned race.

Mr. Cowan is the author of several important works on bees. "The British Bee-keepers' Guide Book," of which some 80,000 copies have been issued, describes the modern methods and recommends the use of a movable-frame hive very similar to the Langstroth. Mr. Cowan recognises the great superiority of the Langstroth hanging frame system over all other systems.

His most scientific work, however, is entitled "The Honey Bee," and is a thoroughly descriptive work on the anatomy of the bee, its natural history, microscopical studies, parthenogenesis, comb construction, &c.

Another exhaustive work of Mr. Cowan is entitled "Wax-Craft." It gives a historical study of the past and present uses of beeswax, its chemical composition, adulteration, tests, production by the bees, rendering of combs, purifying, and bleaching.

On bee diseases, Mr. Cowan is an authority; in fact, in all microscopic studies he has given proof of deep knowledge. The microscope which he uses, and which magnifies a thousandfold, was made by himself, for he is a fine mechanic. This instrument, which I had the opportunity of seeing when he visited us during his first trip to America in 1887, is one of the best in existence. Examining the skeleton of a bee with this instrument was very much like walking over the skeleton of an immense whale, for with the help of two set-screws the object under the lense can be moved back and forth or from right to left gradually and with the greatest ease. Under this same microscope minute pollen grains looked like a pile of oranges of large size, having the same rough appearance.

Mr. Cowan's works have had the honour of translation into eight different languages. He is a linguist himself. On this point I will take the liberty of reproducing part of a letter written by Dr. C. C. Miller to E. R. Root in 1898, after a visit of Mr. and Mrs. Cowan at the Miller home:—

"Mr. Cowan impresses me as a man with a wonderful fund of information, but who has hardly discovered yet that he is any better off in that respect than the ordinary mortal. It so happened that while he was here I received a letter and a newspaper clipping in a foreign language. I didn't even know what was the language—thought by the looks of the printed page that it might possibly be modern Greek. But Mr. Cowan read it off at sight. It was Russian. It made me feel I'd like to begin life over again and be a linguist."

In 1910, at the end of thirty-six years of chairmanship of the British Association, Mr. Cowan made an attempt to retire. As reported in the *American Bee Journal* that summer, "this was felt to be nothing short of a calamity, and instead of accepting his resignation, the Association begged that he 'would take further time for consideration,' with the result that he continued still to fill this position."

In addition to being a bee-keeper of experience, a linguist, and a microscopist, Mr. Cowan is a botanist of great experience. While visiting with him at the Bertrand home in Nyon, where are gathered numerous specimens of exotic plants, shrubs, and trees, brought into the little park adjoining the villa by Mr. Bertrand, both the owner and myself were struck with the wonderful ease with which Mr. Cowan could give the scientific name of every plant he saw, also knowing whence it originated. Botany is needed in bee culture, yet very few of us are versed in its study. I feel justified in saying that Mr. Cowan is probably the best informed apiarist in existence at the present day.

(*To be continued.*)

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Pollen.—Australians are greatly exercising themselves over the question of pollen substitutes; we on this side give too little thought to this subject. All is fish that comes to the bee's net! Yet a little consideration should teach us that if we give our best thought to heat-forming foods it may be well to give a little thought to flesh-forming foods. The special climatic and arboricultural conditions in Australia may mean a different problem there, yet I feel that the want of early sources of pollen, the paucity of pollen in the brood nest during winter, the yield of unhealthy pollen from the flowers, the deteriorated pollen in badly-kept combs through the winter, all account for a good deal of our spring dwindling. I for one will look forward to further light on this subject.

War and Apiculture.—The high cost of the real necessities of life makes the sale of honey drag. Those with much on hand should find new uses for it in their own homes. Australians have been sending smaller quantities across owing to the insurance risk rate—5 per cent. and the

sur-tax 20 per cent.—reducing their profits. Many bee papers have ceased publication, and most of those carried on are feeling the pinch of the hard times. Few Continental ones are passing through, and at the best they are long delayed. The trade in queens has been practically stopped, and there is little prospect of improvement during the coming season.

A New Bee-quietner.—The *American Bee Journal* quotes one Kossi, who predicts that soon we will use no smoke with the bees. He gives a new way to "tame" them. He rubs his hands with powdered naphthaline, and, carefully opening the hive, he lays his hands over the tops of the frames. The odour drives down the bees—and, it is to be presumed, intimidates them.

Penna's Apiary.—Mr. Dadant gives a very interesting account of M. Penna's apiary at Bologna, and he describes it as "By far the finest and best conducted apiary which I have ever seen anywhere, all things considered." Some of our English apiarists might note that colonies are kept mainly in house apiaries. A would-be expert recently informed me that he could see "no good" in such homes of the bees! Apparently real experts like our Italian friend can see much good in them. M. Penna turns out at the rate of 1,000 young queens per month during April, May, June, and July—5,226 queens in all. Hives and nuclei are everywhere, in the park, in the orchard, in the vineyard, and he has seven out-apiaries for honey-production. The illustrations of the various apiaries are very good.

Wintering.—Messrs. Root are making elaborate experiments in wintering bees in the Root-Holterman quadruple cases, so much favoured in many parts of America in recent years. One point deserves mention. While the bees in all these receptacles are "showing well" they look better and fresher in colonies with "glass covers not sealed down," than in those with ordinary absorbent coverings, where there is a free and unobstructed upward ventilation through the packing material. Perhaps the fact that there is no "ceiling" space and no means of ventilating, such as we have in our hive roofs, may account for the slight dampness noticed in the latter overhead packing.

Inbreeding.—This carried to excess is generally considered to lead to deterioration, but several scientists hold that it merely emphasises existing characteristics, good as well as bad. The results would therefore be—weak stocks inbred will deteriorate; strong stocks will not. Breed therefore from the best, and don't worry too much over the question of inbreeding. I am not only considerably inclined to support this theory as far as bees are concerned, but at times I feel I would like to do more inbreeding than is feasible under modern possibilities.

The Winter Cluster.—"In watching a colony it is found that the density, and, consequently, the shape, varied. When the air outdoors was warm the cluster expanded, with cold it contracted. The expansion does not usually cause the bees to cover more frames, but caused them to cover more completely those frames which were occupied. Thus, the expansion is usually downward towards the bottom of the frames and in the direction of the entrance. With cold the bees recede from the bottoms and tops of the frames. One of the most surprising observations is the fact that bees apparently interchange from the outside of the cluster to the inside."

Observing Bees.—Mr. E. Root uses a small pocket electric lamp for looking in at the entrance, which he finds much better than a lantern, because it enables the light to be shot up clear between the frames where the bees are clustered. Novices should not try doing much in this line, and during Zero weather, none.

No V. Starters.—Dr. Miller considers that the use of these starters is not even a satisfactory compromise, but false economy—and a nuisance. The bees will fill up with drone comb, followed by drone brood in the sections. That is why so many cry for the use of excluders.

Honey Judging Competition (p. 21).—My open confession of failure to name the sources of some of these samples reflects in no way upon the utility of such competitions, but rather points to their value in stimulating resolve to do better. Of course, some of the samples were mixed to such an extent that they were almost absurdly impossible, but that does not affect the main conclusion. With one point of "Exhibitor's" letter I am in entire agreement, and that is, much can be learnt from careful consideration of the work of such eminent judges as Mr. Cowan. In fact, most present-day judges would acknowledge their indebtedness to an older generation. Personally, I learnt a great deal at the hands of the late W. Broughton Carr, whose loss we still mourn. He was a particularly practical judge, who had little sympathy with tables of points, and a most successful

exhibitor. This is a point raised by another contributor, and it is worthy of serious consideration. Judges should have some practical experience of showing, and have demonstrated their ability to win prizes. Preparation of show bench honey is one of the best means of education, and a judge educated by such means is less likely to make glaring errors of judgment, than one who has "learned it all from books." Such errors are a gross injustice to exhibitors, and do more to discourage their efforts than any amount of failure due to fair causes.

Honey Judging Competitions (p. 29).—I seem to be in a very small minority with regard to the merit of the sample which gained the second award, but I am quite unrepentant, and only sorry for those who failed to detect the slight signs of fermentation. I am quite sure about this point, and trust that the sample has not been destroyed, for I am confident that time will prove the justice of my condemnation. But I had no intention of rousing criticism of the Dairy Show judge, by my mention of his independent verdict, and I offer him my apology for using his name, and thus bringing down upon his head the fire to which he has been subjected. This does not mean that I agree with his awards, for he kindly allowed me to criticise his awards at the show in question, but I cannot see what this has to do with the Honey Judging Competition.

The Use of the Taster (p. 29).—My own method is not orthodox, but I submit that it has special merit. I prefer to use the taster direct, and to wash it between samples. This obviates sticky fingers and mixed flavours, and is, I think, in every way a superior method of tasting, and more likely to do justice to the honeys. The washing can be done quite easily with a glass of water and a towel during the time that the judge's palate is coming to its decision.

Iodomel (p. 31).—I think I should have been very glad of some of the remedy recently, as I am just recovering from a stiff dose of Russian influenza, so stiff indeed that for one disloyal moment I almost regretted our alliance with that country! But failing this remedy, plain honey had to suffice, and I must testify to the great benefit I received from it when I was allowed such food. It seemed worth while to be a bee-keeper and to have a plentiful supply on hand.

Miniature Heather Super (p. 35).—I have not seen one of these, but Mr. Kidd's description is so clear that I am almost deluded into the belief that not only have I seen but purchased, attracted by the novelty, despite a stock of beautiful heather sections still unsold. I cannot help thinking that there is something in Mr. Kidd's idea. Whether this will be its final form I should not venture to assert, but there is a great deal, not only in the presentation of honey in a novel aspect (that is to say, the edge rather than the side of the comb), but also in an attractive container. We are apt to get into ruts, to become wedded to stock ideas, and the same is true of the somewhat chary consumer. The latter is so accustomed to the stock appearance of comb honey that to confront him (or her) with another view might easily surprise him into purchase. Whether such a package would ultimately hold the field against the convenient section is doubtful, partly on account of price, but the section itself might very well be considered on similar lines. One objection to this miniature super would seem to be that in bountiful years there would be great likelihood of the combs becoming attached to the super below.

Procuring Surplus.

(Continued from page 44.)

That the bees appreciate warmth for their work is shown at (Fig. 59). These sections were taken from the outer rows of a rack badly wrapped down. The top one shows how in such a case they build towards the warmth of the centre from a starter, while the two bottom ones illustrate the same thing even when full sheets are used.

When supering a W.B.C. hive see that there is no escape for the bees between the tunnel board which separates the brood chamber from the outer case at the bottom on the front, otherwise when crowded the bees will cluster and build comb in between (Fig. 60). If the above directions are carefully followed, given strong

stocks and the season is right, then good sections, as (Fig. 61), will be obtained.

As already pointed out, when producing extracted honey, the longer it remains on the hive the better it will ripen. With sections, the case is different; if they remain on too long the bees thicken the cappings. An examination of sealed sections that

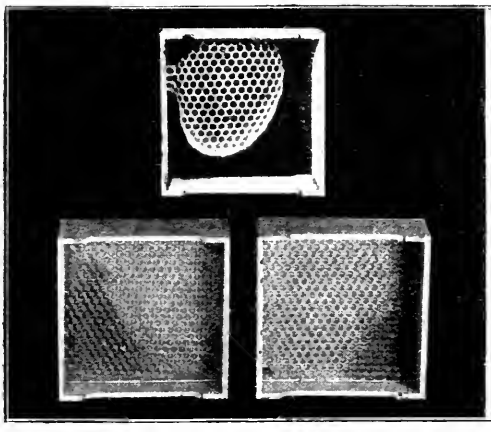


Fig. 59.

Fig. 60.

have been allowed to remain on the hive too long will enable the bee-keeper to see this fault very distinctly, as they present a very uneven surface on account of the small lumps of wax which have been added. Such sections will travel without much

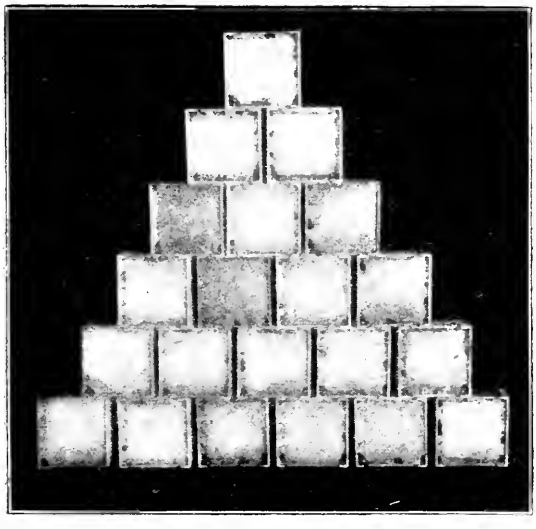


Fig. 61.

Fig. 62.

risk of damage, as the cappings are strong and not likely to crack with the jarring, which is liable to occur in the case of normal thin cappings during their transit by rail, but for selling purposes they are rather unsightly, and the epicure will refuse to purchase them on account of the excessive amount of wax they contain.

The sections should not be removed in odd numbers as sealed (Fig. 62), for this excites the bees unduly, and in the re-arrangement a quantity of bees will be killed by crushing, apart from the fact that the replacing of those removed with others filled with foundation only, breaks up the cluster and disorganises and delays the work for a time. When a fair number are completed in a rack, it should be cleared with an escape, and as mentioned previously, the unfinished ones from several supers

may all be placed together in one rack, to make a complete one to place on a stock requiring more room.

When a stock is being worked for the production of both comb and extracted honey, the section-rack should be placed on first, so that it can be lifted up and

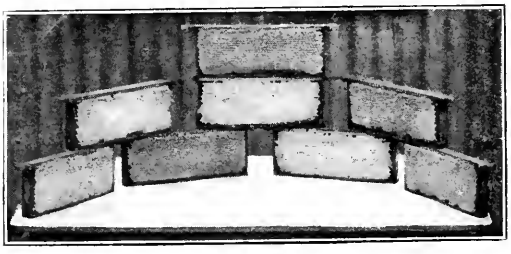


FIG. 63.

FIG. 64.

the shallow-frame super placed underneath to prevent the cappings of the sections being travel-stained by the feet of the multitude of bees passing to the upper super. After removal, the sections should be stored away until required for customers. Defer cleaning them, beyond removing brace combs or propolis from the bottom so that they will stand level and firm, as late as possible, for when first taken off the propolis is very soft and sticky, which makes the work uncomfortable and tedious, but when hardened it is quite easily removed by scraping with a very sharp knife or piece of glass. Sections should be stored in a warm, dry, dark and dustproof cupboard until required, to prevent granulation, and should not be glazed until just before they are sent out, so that they have a fresh and neat appearance.

In working for extracted honey, if the instructions given are carefully followed, each super should, at the end of the season, contain completed combs, as (Fig. 63). It is a great advantage to have plenty of shallow-frame supers filled with combs to storify the hives, for then the extracting of the honey can be carried out at one operation. This is much better than having several sticky messes and repeated cleaning of the appliances used in the process; the cleaning up of the wet combs can also be utilised for feeding those stocks in need of stores at the end of the season.

Larger takes of honey are also obtained, as the bees have nothing to do but fill the cells, ripen and seal the honey. When we consider how very short at times the storing season is, the advantage of built combs is obvious. Situated in the midst of a sainfoin district we have repeatedly had stocks tiered with eight supers (Fig. 64), and each one completed, by having a good reserve of combs, while those which have had to build their combs have not averaged more than three supers. The honey should be extracted immediately the supers are taken from the hive as it is then warm and extracts freely, whereas if allowed to get cold more trouble will be experienced in getting it to leave the combs and a larger quantity will remain adhering to the cell walls. Should it be necessary to keep them for a day or two they should be stored in a very warm room.

(*To be continued.*)

NECTAR-PRODUCING PLANTS AND THEIR POLLEN.

By George Hayes, Beeston, Notts.

MALLOW.

(*Malva sylvestris, moschata rotundifolia*, &c., &c.).

No. 35. NAT. ORD. MALVACEÆ.

This plant is a hardy perennial, found in a wild state in great profusion in some localities as also in our gardens in great variety.

The generic name, Malva, is the old Latin name for Mallow, used by Pliny and Virgil, altered from the Greek *Malachi*, a Mallow, which is probably derived from *malacho*, to soften, referring to its emollient qualities, whilst the specific appellation is indicative of its familiar haunt of the sylvan shade. It attains a height of three or four feet in such surroundings. It is often found growing on waste lands and by the roadsides, where it very rarely attains a height greater than twelve inches, and in the vigorous portion of its life it is covered with flowers of a reddish purple hue. They grow on this species in clusters of from four to six and spring from the axils of the leaves. The petals are five in number and heartshaped, being very conspicuously veined by lines of a darker tint. The stamens of this order are worth special notice. You will find that they are very numerous, all joined together at their base and for a considerable portion of their length into a pillar. This arrangement is called "monodelphous," and means one brotherhood.

Dry.

POLLEN OF MALLOW.

The leaves are borne on long stalks, always broad and rounded in general outline, but divided into five or seven lobes, the edges of which are serrated. The veins of the leaves radiate from the base like the folds of a fan. The stalks and leaves are thickly coated with hair, which makes them look and feel soft and downy.

The fruit is a capsule made up of several parts, and in it the seeds are arranged in a circle. Children in the country call them "cheeses," and gather and eat them.

Its medicinal value is considered to be great, and from it are prepared decoctions, syrup and lozenges, used for various external and internal diseases.

The foregoing applies to most of the species and varieties of this plant in general, except that the colour may be of a lighter tint or darker shade. The various species prefer different situations. *Malva moschata* has a very slight odour of musk.

Althæa officinalis (meaning of reputed value for curing) of scientists is the well-known Marshmallow, which flowers from August to September, has pale rose-coloured flowers, and grows in wet and marshy places, especially near the sea, although I have seen it growing on the banks of the Trent at Newark Castle, as well as on the top of the ruined walls of that structure, where the seed had undoubtedly been carried by birds, and where it appeared to flourish almost as well as below.

Lavatera arborea, or tree mallow of our gardens, is a fine allied species of the plant under consideration and often produces bushes five or six feet high. It is named after two Lavaters—men of note in the botanical world of the earlier days.

If you wish to study this plant you may do so with the Lavatera or the old-fashioned Hollyhocks, as both are cultivated specimens of mallow, and well worthy of a place in gardens. In a wild state Lavatera is only found on the south and west coasts of England and Ireland, also on the Bass Rock, on the Firth of Forth.

It yields both nectar and pollen—the latter in profusion. It is well visited not only by hive bees, but by wild bees and other insects, and as it flowers somewhat late is very useful in that respect.

The pollen grains are large and of a rich golden-yellow colour by reflected light, but very dense by transmitted light. This is owing partly to their size, which prevents the light penetrating well through them. They measure 4-1000th of an inch, are spherical in form, and covered with fairly large spines. The pollen grain changes its form very little either in water or honey, and it is one of the most constant which we have considered. In honey it is still opaque, and when taken out the only apparent difference is that the spines have become somewhat more flexible, owing, presumably, to the absorption of water.

EXTRACTS FROM AN EXPERT'S DIARY.

By J. Herrod-Hempsall.

In one of my earlier "extracts" I referred to an instance where I was told that a sparrow was a good thing on which to feed bees. A letter I have received from Mrs. E. A. Birch, Okehampton, shows that feeding bees with a sparrow in the winter was more or less in vogue in the South-west of England. Mrs. Birch says:—"A lady when eating some

of our honey yesterday (January 26th) asked me if I had sparrows shot to feed the bees in the winter, and said when she was a child they always had a sparrow shot, and roasted, and laid at the entrance of the hive, the bees came out and ate it; her brothers used to shoot the birds."

Probably no class of bee-keepers so well know and feel the need of legislation for dealing with diseases of bees as our touring experts. My diary contains numbers of entries referring to bee-keepers who were terribly handicapped and discouraged by the—to put it mildly—careless methods of neighbouring bee-keepers. I will give just a few instances. Some of the older readers of the JOURNAL will remember the interesting letters from the pen of Mr. W. Loveday, who at that time resided at Hatfield Heath. He had for some years been giving his attention to the rearing of queens, these being bred from only the best stocks in his apiary. Just as he was getting a very good strain, and the progeny of his queens were becoming known as excellent honey gatherers, there being therefore a good demand for the queens, a bee-keeper from Wilts came into the neighbourhood, bringing his bees with him. Unfortunately they were affected with a virulent form of Foul Brood. This bee-keeper was a very good natured individual, who would readily lend his neighbours any of his bee-keeping appliances, and his honey extractor was in frequent demand, but before lending it he neglected to wash it out, the consequence being he not only *lent* his extractor, but *gave* the disease, and in a short time it was rampant in the district. Of course, Mr. Loveday's bees contracted the disease, though not from the extractor. By taking prompt measures it was scotched, but only for a time, as it again made its appearance. This occurred several times, and his stocks were steadily dwindling in numbers when the chief source of his trouble was traced to a neighbouring apiary. The hives were skeps, and their owner—a lady—used, either after "taking" the bees or when the bees had died, to place the skeps outside for other bees to clean out. After some persuasion she consented to let Mr. Loveday deal with them on condition he gave her some swarms to replace the stocks destroyed. To his surprise, however, when he went one evening to deal with them she had altered her mind and would not allow him to touch them, saying the bees were her own, and she should do as she liked with them. The practice of exposing infected hives and combs was continued, and the consequence was that Mr. Loveday lost every bee. The last time I visited him he had only one stock left, and that was just showing symptoms of disease.

Only a few miles away was another well-known honey exhibitor and prize-winner, Mr. Lodge, who also found it impossible to keep clear of Foul Brood owing to infected skeps and combs being placed out for bees to clear only a few yards from his apiary. Eventually he had to hire a piece of ground at a distance, on which stood an old cottage. The bees were treated as advised in the "Guide Book," the contents of about thirty hives were burnt, the hives disinfected, and the apiary established on the new ground. Both these men were good bee-keepers, both suffered from ill-health, and were partly dependent on their bees for a living. Another member offered to exchange healthy for diseased stocks, and another offered to buy some diseased combs in order to burn them, but both were refused. On one occasion I visited an apiary of sixty stocks. I was only allowed to examine half a dozen, taken at random, and these were all diseased. This member was selling either stocks complete, colonies, or swarms. He had not enough knowledge to rear queens although owning so many stocks, or he would have been selling queens as well. Another member did sell queens, and also turned infected combs out for bees to clean up.

I could give numbers of similar cases where legal power to deal with disease would be a boon to bee-keepers.

Foul Brood and other diseases are often spread through ignorance. One spring I visited an apiary and found most of the bees were dead, a fact the owner had ascertained the previous day and promptly turned up a skep and several boxes, and placed the combs from frame-hives here and there, all the lot containing a quantity of Foul Brood of old standing. This was a case of sheer ignorance, and when the matter was explained to him he was very sorry and at once removed all the combs. One bee-keeper who had a stock slightly affected with Foul Brood shook the bees from the combs, and then, as they contained a nice lot of healthy brood which he did not like to waste, he placed a piece of brown paper pierced with a number of holes on the top of the frames in a healthy colony and over this stood the box of infected combs for the brood to hatch out, and there I found them, and also disease appearing in the bottom set of combs. Another bee-keeper had a stock that was getting bad—he could never get quite clear of disease—the bees were made into an artificial swarm, and the whole contents of the hive burned. After confining the bees for 48 hours they were united to another diseased stock. One old man, who was "the bee-man" of

the district and looked after a number of apiaries within about three miles of his home, had inadvertently spread Foul Brood through nearly every apiary by exchanging combs from one to the other. This I found the first time I visited him, and he was in a fine state when he realised what he had done. He profited by the lesson, however, and in a couple of years had a clean bill of health for them all.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

HONEY JUDGING COMPETITIONS.

[9121] As I was the judge at the Dairy Show, perhaps I may be permitted to offer a few remarks as to what took place on this occasion.

It is quite true that at the Dairy Show I was approached by Mr. Crawshaw, and that I gladly discussed the awards of certain exhibits in the wax and heather honey classes.

Respecting the heather honey award, then, as now, I see no reason to revise any of the awards, and still differ from Mr. Crawshaw in two instances: (1) As to incipient fermentation being present in one of the awards; (2) As to whether certain exhibits of a dark liquid sort of heather honey were ling as he maintained, or bell as I maintained. I have always understood that pure ling honey is gelatinous and bubbly, and I was surprised at Mr. Crawshaw's expression of a contrary view. It would be instructive to learn whether other heather men bear him out in this.

Now as to the awards in the wax section. The judge in this class has a more difficult task than the inexperienced realise. Many of the entries here are intended for commercial or industrial purposes (*vide* schedule) in order to encourage the sale of good pure bees-wax. Thus quality is not the only factor to be considered, but also the amount of time and expense given to their preparation and get-up. This is analogous to the class of best bee-hives at a definite figure in the appliance section. If a very well-made hive, beautifully finished off at much cost of time and labour, be exhibited, it is sometimes passed over in favour of one less well-made, which could, however, be profitably turned out in hundreds if ordered. Thus also certain wax exhibits were passed over, in spite of being good quality, in favour of others which were more simply and cheaply got up, and suitable for the retail trade.—O. R. FRANKENSTEIN.

ATHOLL BROSE.

[9122]. The enclosed cutting from to-night's *Evening News* may be of interest to you and the readers of THE BRITISH BEE JOURNAL; but what would you call "Virgin Honeycomb"?—A. C. REDDICK.

"THIS GOODLY MIXTURE."

This is the recipe for the Highlander's nectar, Atholl brose, as given by Edward Spencer ("Nathaniel Gubbins") in his "Cakes and Ale":—

"Upon virgin honeycombs you pour, according to their amount, the oldest French brandy and the most indisputable Scotch whisky in equal proportions.

"You allow this goodly mixture to stand for days in a large pipkin in a cool place, and it is then strained and ready for drinking. Epicures drop into the jug, by way of imparting artistic finish, a small fragment of the honeycomb itself. This I deprecate."

["Virgin Honeycomb" is new comb that has contained nothing but honey. A section of honey is "virgin honeycomb," but, of course in the time of "This Goodly Mixture" sections were not known, and the tops of the combs in skeps and the outside combs that had not contained brood, also the honey from "caps" or bell glasses was, and among skeppists still is, known as "virgin honey."—EDS.]

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of January, 1915, was £2,735. From a return furnished to the BRITISH BEE JOURNAL, by the Statistical Office, H.M. Customs.

NEW START (Ayrshire).—It will be best to move them as soon as possible now. Yes, that method should work out all right.

SUBSCRIBER (Llanberis).—(1) The light honey lacks flavour; that with a "pinkish" colour is a very nice heather blend; both are quite fit for human consumption. (2) It is probable that most cases of "dysentery" are a form of "Isle of

Wight" disease; it is usually a bad sign. (3) There are no articles on that subject, but it will be treated in "Helpful Hints" later on. They should be washed in a solution of Izal or carbolic acid and water. (4) The spores are not able to move of themselves, but must be carried by the bees and find their way into the stomach and intestines before they have any effect.

Suspected Disease.

T. BURGESS (Wilts), L. KEARSEY (Cheltenham), "CORNUBIA" (Cornwall), W. E. T. (Derby), D. A. CRONE (Ayrshire), G. B. BOOTH (Mill Hill), I. W. M. (Beverley).—It is "Isle of Wight" disease.

P. A. JONES (Wellington).—Nos. 1, 3 and 5 are rather too dry for diagnosis, but there are symptoms of "Isle of Wight" disease. No. 2 have been dead some time, and are too dry for diagnosis. No. 4 have died from "Isle of Wight" disease.

C. M. ABBOTT (Eastbourne).—The bees are suffering from "Isle of Wight" disease. It will be best to burn them.

BEE-KEEPER (Durham).—We do not find any disease in the bees sent.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1*d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3*s. per* ¼*in., or* 5*s. per inch.*

PRIVATE ADVERTISEMENTS.

EXTRACTORS, two, geared, one metal lid, 20s.; one polished wood gear, in case, 25s., both as new; ripener, large size, 8s.; and four dozen drawn out shallow frames, healthy, 5s. dozen; rack, 1s.—EXPERT, "Bee Journal" Office, 23, Bedford-street, Strand, W.C.

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d., post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 64

LADY (about 30) required on bee and poultry farm worked by two ladies; must be strong, quick, and willing to make herself generally useful indoors and out; live in.—Address particulars to "E. P.", c/o J. W. Vickers and Co., Ltd., 5, Nicholas-lane, E.C.

PLANT willow herbs, capital honey flower, nine roots, 6d.—BOWEN, Apiarist, Cheltenham. v 48

FOR SALE, sixty first-class W.B.C. hives (no bees), including large number supers; 4-frame reversible extractor, two ripeners, uncapping tank, wax press, excluders, super-clearers, &c. Above hives are exceptionally well made of first-quality wood. An exceptional opportunity for anyone wishing to make a good start, or establish an out-apiary.—Apply, S. P. SOAL, Elinor Lodge, Brook-road, Prittlewell, Essex. v 65

WANTED, twenty stocks, certified healthy, cash; Deposit.—Particulars to "THE BEE-KEEPER," South Yardley Apiary, Birmingham. v 66

WANTED, strong stocks bees, guaranteed free disease; full particulars, lowest price.—FIELD, 259, High-street, Ponder's End.

LIGHT clover honey, 62s. cwt.; sample, 2d.; ½lb. screw tops, 4s. 9d. dozen; sample, 6d.; microscope, in case, bargain, 10s.—ANDREWS, Rock-road, Peterborough. v 62

COMPLETE APIARY of nine stocks for sale, owing to death of owner.—Particulars, C. BRADSHAW, Quarndon, near Derby. v 61

FOUR 28lb. tins pure English honey, 15s. tin; sample, 2d.—C. KIDBY, Sizewell-road, Leiston. v 60

PURPLE willow herbs, yields copiously July-September, nine roots. 6d.—BOWEN, Apiarist, Cheltenham. v 59

CAMERA, Beck's Frena, quarter, cost £8 17s.; field glasses, cash or exchange.—CLEGG, Newton, Stowmarket. v 58

LIGHT coloured extracted honey, four 28lb. tins, 60s.; sample, 2d.—A. BRUTS, Bagthorn End, Halstead, Essex. v 57

GENTLEMAN'S CYCLE, new; exchange bees, appliances, anything useful.—THOS. THIRKILL, Malzeard, Ripon. v 56

FOR SALE, 1¾ cwt. honey, in 28lb. tins, medium colour; 10½lb. beeswax; also twenty dozen good heavy sections; best offer.—C. GIBSON, Bridge Foot, Radwinter, Saffron Walden, Essex. v 55

FOR SALE, 600 sections, good quality; can be forwarded at once.—Price and particulars from H. E. JOLY, Millgrove House, Rathangan, Kildare, Ireland. v 54

FOR SALE, six large hives, excellent condition, lot of appliances, cheap; list sent.—WARD, "Woodside," Hawkhurst, Kent. v 50

FOR SALE, three fine healthy stocks young queens; also three complete hives with all appurtenances; a fine chance for any one wishing to start bee-keeping; may be sold separately.—MRS. RUSSELL, Redlands, Bearsden, Dumbartonshire. v 49

SALE. First grade clover and spring blossom honey, 54s. cwt., 28lb. and 14lb. tins at same rate, free on rail, sample 3d.—The Priory, Colwich, Stafford. v 44

2½ CWTS. good granulated honey, £6 10s. Cash with order, carriage forward. Sample, 3d.—A. LEE, Eastleigh, Bideford, Devon. v 42

BEST laying and table fowl, White Wyandottes; trap-nested strain. Sittings, 4s.; with broody hen, 8s.—BROWN, 20, Temple-st., Wolverhampton. v 46

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, or exchange, ice safe, 21in. long, 20in. deep, and 16in. wide, wants slight repairs, 10s.; too cheap for approval.—BUMBLE, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

SELL or exchange, good dress suit, 36in. chest, 20s.—DRESS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

THE DAVON MICRO-TELESCOPE.

The invention and development of any scientific appliance which will enable us to probe further into the mystery of bees and their ways is bound to help on the practical side of bee-keeping.

The Davon micro-telescope is no exception to the rule, and has the advantage of also being capable of giving a great deal of pleasure to those not of a scientific bent.

We obtained one in the late autumn of last year, and have been astounded at the capabilities of the instrument. We can see the trident points of a lightning conductor on a chimney four miles away as plainly as if we were only that number of yards; soldiers manœuvring and also cooking their meals at the same distance, their faces being clear enough to identify the individual. We have observed small insects creeping on branches fifty yards away. At present we have not been able to carry out tele-photography with it, but from our experience to date we are certain it will do all its inventors claim for it. An instrument that combines the ordinary microscope, powerful telescope and telephoto camera is a marvel, and should be in the hands of all observant bee-keepers. We heartily commend it to our readers, and strongly advise them to procure one. Messrs. F. Davidson and Co., 29. Gt. Portland Street, London, W., are the vendors, and they will be pleased to send full particulars to applicants.

RAILWAY ACCIDENT INSURANCE.

As announced last week, we have included in this issue a coupon insuring our readers against fatal railway accident. All that need be done is to sign each coupon, which holds good for the week of issue. Those only who have the JOURNAL direct from this office need not sign the coupon every week, their order to us for the supply of the JOURNAL being sufficient, and will hold good until the subscription is run out, or for twelve months from the date of this issue. The amount of insurance is not large, but should a fatal railway accident overtake any of our readers it would no doubt be very welcome to their dependents. At the same time, we sincerely hope no one will have to make a claim for the money.

TWO OF EUROPE'S MOST NOTED APIARISTS.

(Continued from page 56).

EDWARD BERTRAND.

Mr. Bertrand was born in Geneva, Switzerland, in 1832, he is therefore nearly eighty-three years of age. After having received a thorough education in his native city, he went to England at the age of twenty, where he spent three years, becoming thoroughly acquainted with the English language. He finally accepted a position with a Paris broker and remained in that occupation until after the Franco-Prussian War of 1870. The worry of the siege and of the Commune upheaval which followed, through a portion of which he was charged with the great responsibility of guarding large funds left in his care, gave him a nervous tension which affected his health and from which he never fully recovered. It was then that he decided to withdraw from active business, retire to his home country, in a pretty villa or châlet which he purchased on the shore of Lake Geneva, in full view of Mont Blanc, and where he cultivates trees, flowers, and bees. He was induced to try the bees through the gift from one of his friends of two colonies in straw skeps.

His beginning in apiculture was a failure. The location on the lake shore was not very favourable, since the bees had only half the scope of pasture which would be secured farther from the water. He tried the local inventions of movable-frame hives, with small frames, then the Berlepsch or German method.

After many drawbacks he finally purchased the works of DeLayens and of the elder Dadant, tried their systems, and in 1877 his success began. He installed two out-apiaries in the mountains of the Canton of Vaud, and another in 1880 in the Jura Mountains.

With the help of one of his pupils, for he was teaching apiculture gratis, he established this last-mentioned apiary, and finally obtained large crops. A hive on scales at this apiary once showed an increase of 11 kilograms (24.2lbs.), in twenty-four hours. In 1876 he had been elected secretary of the Société Romande of Apiculture. He was its president at different dates. But as this association, by the terms of its constitution, could not retain the same president more than two successive years, he became its treasurer and librarian and remained in this office until 1903.

In 1879 he established, at his own expense, a monthly Bulletin, intended as the organ of the above-named association. But this publication became so popular

in all French-speaking countries, so cosmopolitan in its make-up, that within three years its title was changed to that of *Revue Internationale d'Apiculture*, which continued until 1903, with the help of Mr. Bertrand's wife and of a noted French apiarist, Crépieux-Jamin. According to Thos. Wm. Cowan, this was "without doubt the most practical and best French bee journal on modern bee culture."

The works published by Mr. Bertrand, at different times, for the use of beginners form quite an extensive apiarian library. I will mention some of them: "Routine and Modern Methods," "Description of the Best Hives," "Advice and Notes for Beginners," "Bee-keepers' Calendar," &c. The material contained in these small works was later condensed into a larger work, entitled "Conduite du Rucher" ("Management of the Apiary"). The latter work, after seven translations and many editions, is still considered the standard bee book in Switzerland and many other countries.

In 1886 Mr. Bertrand translated the work of Cowan, "The British Bee-keepers' Guide Book"; later, in 1890, the Italian work of Rauschenfels, "The Bee Moth." In 1891 he took very active part in the publication of the Dadant-Langstroth book, "The Hive and Honey Bee," in French. Two editions of this were published in Geneva under his supervision. He also published a pamphlet describing the "Dadant-Blatt Hive." In 1897 the "Unedited Letters of François Huber" were gathered and published by him, for we must not forget that he lives in the very country where this famous writer made and published his interesting studies of the honey bee. Vevay, the home of Huber, is only about thirty miles from Nyon, on the shore of the same lake. These unedited Letters have never yet been translated into English, and I have often wondered whether a translation of them would be welcome to our American readers.

In 1901, after having fought and destroyed foul-brood in his apiaries, by the constant and careful use of drugs, he published a work on this disease and its treatment, then translated the book of F. C. Harrison, Canadian bacteriologist, upon the same subject. He has also translated the "Honey Bee" and "Wax-Craft" of Cowan into French.

The biography of Mr. Bertrand would be incomplete if I should fail to give more definite detail of the work of his wife, whom I have already mentioned in connection with the publication of the *Revue Internationale*. Mrs. Bertrand, born also in Switzerland, in 1843, and therefore eleven years younger than her husband, was educated in Paris, and it was there that they became acquainted, and were married in 1866. She is as devoted to bee culture as her husband, and worked with him in the publishing of both his magazines and his books. Versed, like him, in several languages, she translated numerous articles from the English, American, and Italian press, and assisted her husband in every part of his labours.

Willing workers, Mr. and Mrs. Bertrand gave their time freely to apiarian teachings. He gave lectures and demonstrations in both Nyon and Zug, free, for three years, from 1884 to 1887. Pupils were sent to him by the French Ministry of Agriculture for better acquaintance with the new methods. He also taught apiculture at the Agricultural Institute of Lausanne and at the Horticultural School of Geneva.

Ill-health compelled Mr. Bertrand, in 1903, to abandon his magazine and his apiarian teachings. But both he and his wife are still affable and kind to the friends they have made in bee culture. We tested this at our visit to Switzerland in 1913. During that visit a Paris bacteriologist of the Pasteur Institute, Mr. Melikoff, called at the Bertrand home for information concerning foul-brood. This gentleman, a Russian by birth, knew Mr. Bertrand only by the reputation that he had gained through active and earnest labour. But he expressed the consensus of the world's opinion concerning our friend in a short but well-deserved compliment when he called him "the most celebrated authority on bees in the entire world."

REVIEW.

DEFENDERS OF THE EMPIRE.

Messrs. Raphael Tuck and Sons are publishing a picture in their famous "Oilette" process with the above title. It is in three forms: for framing, as a Zag Zaw puzzle, and as a post card. The entire proceeds of the sale of these pictures go to the Prince of Wales' National Relief Fund—£1,000 having already been paid in from this source. The picture is a splendid piece of work, and is "printed in England." All branches of the Army and Navy are represented, the colouring being magnificent, and a tribute to the skill of English colour printers. The picture, suitably framed, would grace the walls of the most pretensious mansion. The post cards are excellently got up with gilt bevel edge, the title also being printed in gold. A key is given with each picture. The picture for framing is sold at 1s. 6d., the post cards 1d. each, and the puzzle at 10s. 6d. and 15s.

NECTAR-PRODUCING PLANTS AND THEIR POLLEN.

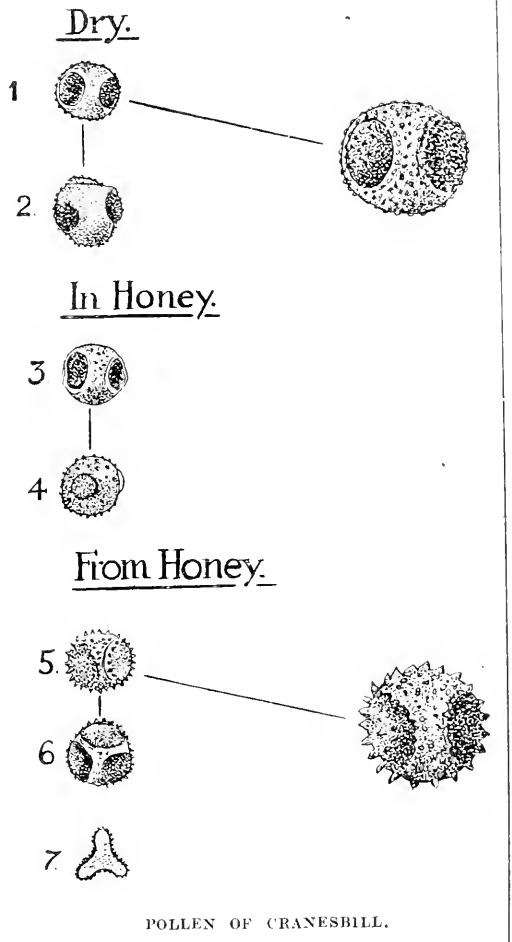
By George Hayes, Beeston, Notts.

CRANESBILL.

(Geranium pratense, &c., &c.).

No. 36. NAT. ORD. GERANIACEÆ.

All the plants of this genus, of which there are a large number, are called Cranesbills, a name given them because of the peculiar form of the seed vessel or



POLLEN OF CRANESBILL.

fruit, which simulates the bill of a crane. Geranium, having the same meaning, is derived from the Greek word for a crane, "geranos."

Of the species most common we have the Purple Cranesbill, Ragged Robin, Herb Robert, Dovesfoot Cranesbill, the Meadow Cranesbill, and others. Anyone taking a note of all the species found in one season will be surprised at their number.

In our county they are mostly found in hedge-rows and on railway and other banks, but in Derbyshire and Lancashire they may be found growing on old stone walls and ruins. One species—*G. Robertianum*, or Herb Robert—will be found almost everywhere, and lends a charm to the old grey stone walls and ruins with its cheery little blossoms and its foliage of varied hues.

The other species are also very attractive. Their large masses of foliage, varying from dark green to crimson, crowned by a mass of light or dark pink or bluish-purple flowers, give one more joy in beholding them than those so delicately reared in our greenhouses, which, of course, belong to the same genus.

Nearly all the species agree in one conspicuous point, viz., the main flower stem breaks out at its summit into lesser stalks, each being surmounted by a flower. The stems are forked with jointed swellings at the articulation and very brittle. The leaves of some species are round and divided into fine lobes, whilst in others they are deeply cut and serrated. The flowers are arranged in loose heads of blossom.

These plants are included in our list because they are in great abundance in every county and are evidently well visited by bees; for it is rarely we get a sample of honey from mixed sources which does not contain pollen grains from some of this family, which are alike in form and colour but vary slightly in size.

The pollen grain, like that of the Crocus and Mallow, is a large one; all three being about the same size. In form it is a sphere, having three large circular depressions equidistant round its equator. Its surface—including these depressions—is covered with prominent pimples. See No. 1 and its enlargement. No. 2 being the same grain viewed at another angle. By reflected light it is bright yellow, but more opaque by transmitted light, and when dry measures slightly under 4-1000th of an inch in diameter.

In honey it is still opaque, and what were depressions when dry, in some of the grains become very slight protuberances, as seen at No. 4. Both the forms of Nos. 3 and 4 are found when in honey.

If taken from honey this process falls back and resumes its former depression; the pimples become slightly elongated, and it now measures fully 4-1000th of an inch, as seen in No. 5 and its enlargements. No. 6 is the same as No. 5, but viewed from its pole or top, whilst No. 7 is a section through its equator or middle.

ABERDEENSHIRE AND DISTRICT B.K.A.

ANNUAL MEETING.

The annual general meeting of the above Association was held on Saturday, February 6th, at Marischal College, Aberdeen. There was not a large attendance, no doubt owing to the very boisterous and cold weather.

The report and balance-sheet for 1914 were presented. The balance-sheet showed a very good increase of balance in hand, owing to the membership, which has risen from less than 100 to 200 members. The chairman also reported that fifty new members had already been obtained for 1915.

The Marquis of Aberdeen was re-elected president, and a large number of names were added to the list of vice-presidents. Mr. A. H. E. Wood was re-elected chairman of the Association, while Mr. E. Rezin was elected honorary secretary and treasurer, Mr. Alec. Low having resigned on his appointment as Association Expert for the northern part of Aberdeenshire; Miss N. M. Robinson being appointed expert for South Aberdeenshire and for part of Kincardineshire.

Some new names have been added to the committee, which will strengthen the working of the Association.

The past honey season was good on the whole; some districts doing well with clover and others doing very well with heather.

The "Isle of Wight" disease is spreading, and in some districts foul brood is very bad.—EDWIN REZIN.

GLAMORGAN B.K.A.

ANNUAL MEETING.

The Annual Meeting was held at Llantrissant on Saturday, the 13th inst., Mr. W. Meyler Thomas, J.P., presiding over a good attendance. The Right Hon. the Earl of Plymouth was re-elected president; Mr. John Jenkins, auditor; Mr. F. Gravil, treasurer, and Mr. W. J. Wiltshire, secretary.

In moving the adoption of the report for the year ended 31st December, 1914, the chairman said it showed the Association to be in a very satisfactory position. There was an increase in the number of members and also in the amount of the subscriptions. Referring to the quantity of honey gathered in the country, he found that 19,132lbs. more had been harvested this year than in the previous year. As a member of the Central Chamber of Agriculture he had opportunities of considering reports from all parts of the country, and while so many of their representatives were members of the House of Lords and about eighty of them members of the House of Commons, still it was a matter to be regretted that the Government refused to legislate to prevent the spread of disease among bees and deal with it as in the case of sheep scab or swine fever. Their chamber had passed resolutions in favour of bee legislation. Referring to the lectures and demonstrations with live bees given by the Association at meetings and shows throughout the county, the chairman said he considered these of great value, and resulted in causing many bee-keepers to take a more intelligent interest in the management of their bees and inducing them to adopt more modern methods and recognised improvements.

Rev. H. Morgan (C.C. expert) was satisfied that the Association was doing important work and making substantial progress. He attributed the outbreak of "Isle of Wight" disease in the county to be due to diseased bees being introduced from affected districts, and gave instances where the disease was so traced. Many bee-keepers opposed legislation because they objected to having their bees inspected. They would be willing for an Act of Parliament if offered appointments as inspectors.

Mr. F. Gravil and W. Meyler Thomas, Esq., J.P., were elected representatives on the B.B.K.A. Council; Rev. H. Morgan was elected representative on the Glamorgan Chamber of Agriculture.

The chairman generously entertained the members at tea, and in the evening Mr. W. Dyche, B.A., gave a lecture on "Some Personal Experiences with Bees," dealing specially with the "Isle of Wight" disease.

A very useful and instructive discussion followed, in which Messrs. Gravil, Wm. Morgan, R. Thomas Spiller, and Rev. H. Morgan took part.

The chairman was accorded a hearty vote of thanks for contributing so willingly in making the meeting a success.

PRESS CUTTINGS.

SILKWORM AND BEE DISEASES.

The ninth of the series of Thomson lectures was delivered by Dr. J. Rennie yesterday afternoon, in the United Free Church College, upon "Silkworm and Bee Diseases." The chief interest of the former disease now lies in the influence it had as an incident in the life of Pasteur in contributing to the confirmation of his views as to the *rôle* of micro-organisms in disease. Pasteur was engaged in the study of fermentation at the time, and was led to ask himself the question if fermentation changes are due to the activity of micro-organisms, why may not the changes in the body in disease be due to a similar

cause? Sixty years ago we knew practically nothing of the causes of the important fevers and plagues affecting man, and it is in the answers which Pasteur found to his scientific inquiries at this period that all the progress traced in the studies of the present course have found their original inspiration. The "Isle of Wight" bee disease appears to be reckoned as a new infectious disease, although this is doubtful. It has been attributed to a protozoon, termed nosema. There are some peculiarities of the disease, such as the existence of races of bees said to be immune to the ill-effects, but which have the power of dispersing the germs of the disease. These, if they exist, would seem to be analogous to the "typhoid carrier" amongst human beings, and must be very harmful. Sometimes, although the disease is rampant, the parasite cannot be traced, and there are other peculiarities, all calling for further inquiry. It is questionable whether the disease reputed to be "Isle of Wight" disease is always the same disease. The symptoms usually accepted as diagnostic may be general to more than one complaint. These problems are at present being investigated. There was again a good audience, over which Professor Selby presided.—From *The Aberdeen Free Press*.

MASON-BEES.

We were much troubled by these ingenious insects in the country districts of North New Zealand. They built in the keyholes, in the folds of the curtains, between the pictures and the walls, and even in the sleeves of any garment which had been left hanging undisturbed for a few hours.

The peculiar yellow-coloured mud which the mason-bees used for their galleries stained the garments they patronised even after the cells were destroyed.

But the most repulsive thing about these mud-galleries was that each cell contained a spider, placed there by the parent insect as food for the future grub.

The mason-bee possesses a strange poison with which it paralyses, but does not kill, the unfortunate spider, leaving it to be devoured alive when the grub leaves the egg.

It was most disgusting to find dozens of these dead-alive spiders in one's clothes, as was often the case.

I have never seen any honey in the cells.—Ellen W. Maidment.—From *The Saturday Westminster Gazette*.

ROYAL SHOW FUND.

	£	s.	d.
Donations already received ...	24	19	0

WAR RELIEF FUNDS.

	£	s.	d.
Donations already received ...	3	6	0

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

BEE NOTES FROM THE PUNJAB.

[9123] Having kept bees (*Apis Indica*) in this part of the Himalayas for the past twenty-eight years, I have from time to time been struck with the extraordinary intelligence (I can think of no better word) displayed by the little fellows under certain circumstances. Fortunately, I have kept notes of my apicultural experiences, and glancing over them just now I am reminded of a very singular happening which filled me with wonder at the time, and may interest some of your readers.

Early in the afternoon of Sept. 21st, 1890, I suddenly made up my mind to transfer the bees occupying a straw skep to a new wooden hive. With this intent I went to have a look at the bees, when to my surprise I found them leaving the hive as fast as they could, and flying about in the air exactly as they do when swarming. I waited two or three minutes, then turning the skep up found that every bee had left it. I immediately cut out the combs—some containing small patches of brood—fitted them into frames in the new wooden hive, which I placed near where the skep had formerly stood. In a very few minutes (I barely had time to fit everything ready) back came the whole colony and took possession of the wooden hive. I fed the bees, and before winter the hive compared very favourably with others I had.

Again, on March 31st, 1892, I artificially swarmed my No. 1 hive, making No. 13. On April 6th following a swarm issued from No. 13, but instead of flying some distance to settle, the greater portion of it returned in a mass to No. 1. No. 1 was weak from too many bees having gone

VILLAGER'S HIVE IN THE PUNJAB.

LIEUT. COUSINS' APIARY, SANAWAR.

over, and I was just thinking of reversing the positions of the hives for a while to augment the numbers in the parent hive, when the bees acted as described, thereby saving me much trouble.

I could give many other instances which lead me to think that our dear little friend the bee has been endowed with something more than mere instinct, though I have no doubt some of your readers will say that such happenings are only coincidences.

It may interest bee-keepers in the Old Country to know that apiculture is being taken up by many persons in the Punjab. The "Simla Bee-keepers' Association," which was started last autumn, has now a membership of 26, and there seems every prospect of the industry becoming quite popular with Indian villagers in the hill districts. It is a pity that disease being so prevalent at home renders the importation of Italian and English bees into this country a very risky proceeding. Disease appears to be unknown among indigenous bees, and from what I have recently read of the ravages of disease amongst English apiaries, I hesitate before introducing bees of other countries, though I should much like to improve in size, and in other respects, the honey bees of this neighbourhood. We possess one large variety, but unfortunately it builds but one comb, and is therefore useless for the ordinary frame hive. I have tried keeping this variety (*A. Dorsata*) in a large specially made hive, but without success.—Yours faithfully, F. S. Cousins, Resident Apiarist. Recognised by the Punjab Government, Sanawar, Jan. 20th, 1915.

HONEY JUDGING COMPETITION.

[9124] I congratulate our Editors on allowing this matter to be threshed out in the columns of the British Bee Journal. I also thank Messrs. Judge and Bowen for backing my arguments. It is satisfactory to know that at least one member of the Council has advanced and rational ideas on this matter. I sincerely hope the silent ones are being converted. After seeing the sad loss my antagonist, Mr. A. G. Pugh, has sustained I had decided out of respect and sympathy with him to let the matter drop, when, lo! upon opening my British Bee Journal this morning I find further proof of the correctness of my allegations in a letter from the judge at the Dairy Show, which compels a reply. He demonstrates his inexperience, callowness, and lack of confidence in himself by his attempt to defend his actions. The experienced judge makes his awards, and having done so to the satisfaction of his own conscience, like a wise man, remains silent to all criticism. By his own confession the judge was guilty of carelessness, as well as incompetency. Evidently he either did not read his schedule or failed to understand its meaning. Reference to my letter will show that I dealt with the wax class of one pound cakes for quality, and not to the commercial class—the latter is never found at local shows, and could be judged by a grocer who had never even seen a bee, as it deals with shapes and packages for retailing over the counter, quality being of minor importance. I am convinced now that he judged this class before, and not after lunch, as I suggested, for he saw singly instead of double. His comparison with the hive classes is beside the question, and at the same time illogical. If ever he judges appliances the manufacturer who stages a rough shop-soiled hive, that can be obtained in hundreds, will evidently be awarded the prize. Is he really so ignorant of shows that he does not know that appliance manufacturers are bound to give an undertaking to supply the same quality hives as those exhibited at the price stated, for twelve months? I have yet to see the judge *who knows his work and reads his schedule* that would pass over the best hive for an inferior one for the reason given. Where, oh, where! does the *simplicity and cheapness in get up* of a one pound cake of wax come in?

With regard to the heather honey, I did not specify any particular class in which prizes were awarded to fermented honey. That this did occur in more than one class is now proven out of the judge's own mouth by his confession of the criticism of Mr. Crawshaw, which, until now, I thought applied only to the honey judging competition, and not to the Dairy Show classes. Of course, he does not see any reason to change his views. The cocksure theorist who, as Mr. Bowen says, "can talk till all's blue," is *never* wrong in his own estimation. What an experience of heather honey he must have had when he "has always *understood* that heather honey is gelatinous and *bubbly!*" (The italics are mine.) There you have it! Spell *bubbly*, *fermentation*, and the exhibitor knows what to stage to win under this judge. He does not even know for certain the difference between Ling and Bell Heather honey, and he (a judge) appeals to heather men (exhibitors) to tell him which is which; not only so, but he attempts to convict Mr. Crawshaw of ignorance as gross as his own by attributing to him a statement as ridiculous as it is untruthful. As a fellow heather man, I shall not believe that Mr. Crawshaw ever

stated that "pure ling honey is a dark *liquid*," until I have it from his own pen; if he maintains this, then I shall be quite certain that he has had by contagion a severe attack of *German* and not *Russian* influenza, as per his cappings in last week's issue.—AN EXHIBITOR FOR THIRTY YEARS.

HONEY JUDGING COMPETITION.

[9125] At this stage of the correspondence on the recent Honey Judging Competition, I think a few lines from me as winner of the premier award will not be out of place.

First of all I must confess that the work of picking out the sources was a far more difficult matter than I anticipated, and, in my opinion, a far harder task than placing the awards at *any* show.

Had it not been for my vast experience as judge and touring expert in many counties, combined with long experience as an exhibitor, I could not have attained the position that I did.

Whether these competitions, or even classes, will give us more efficient judges is doubtful. Personally, I do not think they will. Both may be helpful to those who can attend and take advantage of them, but the best judges of bee produce are certainly those who have had an extended experience as bee-keepers and exhibitors.

That there is need for better judges there can be no doubt, and every Show Committee, especially those in connection with Bee-keepers' Associations, should see to it that the judges they select have good qualifications.—JOSEPH PRICE, Haden Hill, Old Hill, Staffs.

ROYAL SHOW FUND.

[9126] *Re* fund for "Royal Show." I have not seen it said how much is required for this. It would, in my opinion, be a mistake not to have our exhibit there.

I am writing to suggest that the affiliated Bee-keepers' Associations should at their spring conferences take a collection on the principle that "many a mickle makes a muckle," and bee-keepers generally are not rich. I will contribute either direct or through our Leicestershire Association.—W. E. BIGGS.

[We commend the above to the notice of the county Bee-keepers' Associations and their secretaries. About another £10 is needed, and this sum should be easily raised in the manner indicated above, and would allow those who cannot afford a large sum to give a small donation at the annual meeting of their Association.—EDS.]

THE "B.B.J." AT THE FRONT.

[9127] I beg to acknowledge receipt of the "B.B.J.s" from August, 1914, to January, 1915, for which I thank you very kindly. Rev. D. Lloyd Jones, of Cavendish, Suffolk, is forwarding me the "B.B.J." until the end of the war, assuming I scrape through until then, which I hope to do, and return to "Old England" again and to our pets—the bees. During last August on the retirement I was lost in the German lines for three days and nights. At a small village I had permission (just before the people left the village) to take some honey, and being anxious to leave the bees comfortable was almost captured; the postmistress was owner of the bees in question, and another and myself were left in charge of office with orders to stick as long as possible and then smash telegraph and telephone apparatus. The article *re* "Use of Bees in Warfare" by Germans was very interesting, not only to myself but to non-beemen who are with me. Had this business not arisen I should have had forty or fifty stocks this year, but *après la guerre* I shall have to prepare for the coming year following my return, to which I am looking forward. No doubt the "B.B.J.s" will be read over and over again until there is very little left to read; we often pick up small scraps of paper (English) to read. I must now close with kindest regards and best wishes to yourself and readers.—L. KETTLE.

VIRGIN HONEYCOMB.

[9128] In reference to 9122 the answer to the question of A. C. Reddick is as follows:—Virgin Honeycomb, as understood by real old bee-keepers, is that obtained from a virgin swarm. The virgin swarm is one issuing from a first swarm during the same summer. It is always taken at the end of the season, and the honey from it is considered to be the very best. It is kept separate from the other, and sold as "Virgin Honey" at a higher price.—J. S. LAWTON.

[Virgin Honeycomb, it appears, has a different meaning in different parts of the country. The explanation we gave is the one current in and around our native place. We should imagine that honey from a virgin swarm would be somewhat scarce anywhere, especially in Scotland, and can quite understand it being sold for a higher price for that reason.—EDS.]

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

[8996] *Bees and Poultry.*—(1) In keeping bees near poultry is it necessary to keep the hives fenced off so that the poultry cannot get near the hives? (2) Will poultry eat the bees on the alighting-boards?—ALPHA.

REPLY.—(1) It is not necessary but it is safer for the poultry to fence them off, as bees will at times attack them. (2) Yes, they will occasionally contract that habit.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

REV. D. R. T. (Llanarth).—*Fumigating Combs.*—All have died from "Isle of Wight" disease. The bees are natives. The queen of No. 1 was old. It is certainly safer to melt the combs down and burn the frames. To fumigate, place them in an airtight box or cupboard, with a dish or saucer containing 40 per cent. Formaldehyde, the quantity will depend on the size of the chamber—about 1oz. for each 15 cubic feet: a little more will do no harm.

C. H. ORCHARD (Woking). *Transferring Bees to a Frame Hive.*—(1) Do not place them on the frames until the end of April unless the box becomes overcrowded. Eight frames will be enough. (2) We cannot say, unless they were attracted by the sun shining on the entrance. (3) We prefer a queen excluder. (4) The "Brice" is the best and most practicable swarm catcher on the market so far. We wish you every success, and hope you will be able to keep clear of "Isle of Wight" disease—we advise you to "make haste slowly."

"FUMIGATOR" (Worcester).—*Fumigating Combs.*—For the space you give—15 cubic feet—use at least 1oz. of 40 per cent. Formaldehyde, more would do no harm. We presume you mean brood combs; it would not be safe to trust to fumigation with these, as it is doubtful if all the spores would be killed even with prolonged treatment.

J. E. HODSALL (Sussex).—Bees should do well in that district if properly looked after.

W. E. TEAGLE (Derby).—If they were cleaned up by the bees and are free from honey they would be safe if fumigated. Use formaldehyde for the purpose.

Suspected Disease.

G. E. H. P. (Salop), F. J. B. (Northampton), E. LOOMS (Stratford), J. L. (Kettering), R. JAMES (Penarth).—It is "Isle of Wight" disease.

R. FORD (Ombersleigh).—The bees died from "Isle of Wight" disease. Better burn the contents of the other hives, as those bees too have probably died from the same cause. If the combs are not too old you might melt them down for the wax. Pleased to hear you were so careful to sweep up and burn all dead bees. Lime and, if possible, dig the ground where the hives stood.

"LEICESTERSHIRE."—"Isle of Wight" disease has caused their death. They are natives. The honey is quite fit for human consumption.

CONSTANT READER (Shiplake).—The bees were too dry for diagnosis. It is quite likely the damp would cause their death.

W. HUNT (Hants).—The few cells contained odourless Foul Brood. Your bees are evidently becoming more or less immune to "Isle of Wight" disease.

TRADE CATALOGUES RECEIVED.

JAS. LEE & SON (*Head Office and Power Works, George Street, Uxbridge, Middlesex; Showroom*, 10, *Silver Street, Holborne; Bee Farms, Fulbourne and Wilbraham, Cambridge*).—Messrs. Lee & Son again issue a most complete retail list of bee goods. "Good wine needs no bush," and we therefore say no more than that the bee-keeper will find all that is necessary in this catalogue, and he may depend on getting good sound material and workmanship combined with moderate prices. The catalogue may be had free on application.

E. H. TAYLOR (*Hive Works, Welwyn, Herts*).—As usual this catalogue is very comprehensive, and in it will be found everything that the bee-keeper may need. There is a great variety of hives to meet all tastes and to suit all pockets, listed and illustrated. The firm have put down plant for the manufacture of weed foundation, and the works have been enlarged and modernized. For those who combine poultry-keeping with bee-keeping there is a list of poultry appliances. A selection of garden requisites is also included. The catalogue may be had post free on application.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee keepers' Record" free of charge

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1d. *per word as* "Business" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS.

SIX dozen shallow frames, fitted drone foundation, wired, never used, 3s. 9d. per dozen; in frame boxes, 1s. 3d. extra; six Porter clearer boards, 1s. 6d. each; large honey ripener, 8s.—ZETA, "B.B.J." Office, 23, Bedford street, Strand, W.C.

MEAD: 140 gallons old and superior for disposal. LONGHURST, Longfield, Kent. v 73

FOR SALE 4 cwt. of splendid granulated honey, in 28lb. tins, price 60s. cwt.; sample, 2d. WM. HOLLAND, Bee-keeper, Swannington, Norwich. v 74

HONEY, white clover, in bottles, cheap to clear; owner guarantees careful packing; 1lb. sample, 9d HAROLD COLLIN, Exning, Newmarket. v 72

ON SALE, good microscope; or exchange for bees.—A. FURNESS, Westgate, Halifax. v 69

CRIMSON clove carnations, 2s. 6d. dozen; exchange bees, appliances, books.—MACE, Stow, Huntingdon. v 71

LIGHT honey, in 28lb. tins, granulated, 56s. per cwt.—T. EVERETT, Soham, Cambs. v 70

CHESHIRE'S "Bee-Keeping," Vol. 2, practical, new condition, 17s. 6d.—C. PINKNEY, Sleights, Yorks. v 68

FOR SALE, heather honey, 1lb. screw cap bottles, 9s. per dozen.—LASHBROOK, Lynton, North Devon. v 67

WANTED, twenty stocks, certified healthy, cash; Deposit.—Particulars to "THE BEE-KEEPER," South Yardley Apiary, Birmingham. v 66

WANTED, strong stocks bees, guaranteed free disease; full particulars, lowest price.—FIELD, 259, High-street, Ponder's End.

PURPLE willow herbs, yields copiously July-September, nine roots, 6d.—BOWEN, Apiarist, Cheltenham. v 59

LIGHT coloured extracted honey, four 28lb. tins, 60s.; sample, 2d.—A. BRUTS, Bagthorn End, Halstead, Essex. v 57

GENTLEMAN'S CYCLE, new; exchange bees, appliances, anything usefnl.—THOS. THIRKILL, Malzeard, Ripon. v 56

FOR SALE, six large hives, excellent condition, lot of appliances, cheap; list sent.—WARD, "Woodside," Hawkhurst, Kent. v 50

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, or exchange, ice safe, 21in. long, 20in. deep, and 16in. wide, wants slight repairs, 10s.; too cheap for approval.—BUMBLE, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

SELL or exchange, good dress suit, 36in. chest, 20s.—DRESS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a complete comb of both a bad and mild case of Foul Brood.—HERROD, "B.B.J." Office.

Editorial

BRITISH BEE-KEEPERS' ASSOCIATION ANNUAL MEETING.

We call our readers' attention to the above, which is to be held in the Lecture Hall at the Zoological Gardens, Regent's Park, London, N.W., on Thursday next, March 18th. A most hearty invitation to the Conversazione is extended to all who are interested in bee-keeping, whether members or not. Tea will be provided for all at 5.30 p.m., after which G. Hayes, Esq., of Beeston, Notts, will give a lecture, illustrated by lantern views, on "The Separation, Examination, and Photographing of Pollen Grains from Honey." The lecturer is well known to our readers through his splendid series of articles on "Pollen" which have appeared in our pages, therefore they can rest assured that a most enjoyable and instructive entertainment will be provided, and each one should make a special effort to be present.

"Business as usual" should be our motto, and the endeavour of all should be to make the meeting as successful as ever.

TWO OF EUROPE'S MOST NOTED APIARISTS.

We should have mentioned that the Junior Editor has taken the sole responsibility for inserting the article by Mr. Dadant which concluded in our last issue. Had Mr. Cowan seen the MS. our readers would not have had the pleasure of reading what is said of him in America, as he would, as usual, have prevented any eulogistic comment upon himself from appearing in our columns.

OBITUARY NOTICE.

MR. W. LLOYD, LANCASTER.

It is with great regret we announce the death, at the age of sixty years, of Mr. W. Lloyd, of 2, Bank Road, Skerton, Lancaster. Deceased was a most enthusiastic bee-keeper, his manly figure and cheery face being known to the majority of bee-keepers for twelve to twenty miles round Lancaster, and it is pretty safe to say that throughout the county of Lancashire those who did not know him personally knew him by repute. He was never tired of talking bees, and was never so happy as when working among them. He was one of the most energetic local secretaries of the Lancs. B.K.A., a position he held for about twelve years, and took a great interest in the work of the Association. As an exhibitor at shows he had won several medals and the silver cups at Lancaster and Preston. He was mainly responsible for the prominent place the honey section took at the Lancaster Show, and for several years guaranteed a sum of £20 towards the prizes and expenses—no small sum to be collected by a working man. On his rounds as a drayman he always carried with him a carbolic cloth, and veil, and while his horses were "baiting" he would probably be giving someone a helping hand with their bees, and he grudged neither time nor trouble in helping those who were not so well up in bee-keeping as himself. He was a prominent co-operator and one of the oldest members of the Centenary P.S.A. Brotherhood.

MR. W. LLOYD.

One of our correspondents writes: "One of his employers said to me 'He was a good servant, *absolutely straight*.' What better epitaph could any man desire? We local bee-keepers shall miss him sorely."

Mr. Lloyd was taken ill on Saturday, February 6th, and went into the infirmary for an operation, but heart trouble caused his death in twenty-four hours. We are sure that Mrs. Lloyd—who has been a true bee-keeper's helpmate—and the family of six sons and two daughters, most of whom are abroad, will have the sincere sympathy of our readers in their loss.

BLURTS FROM A SCRATCHY PEN.

CONTINENTAL WANDERINGS—RHINELAND.

Fast, too fast, were our holidays waning. But three days more and still such a lot of ground to cover. In front of me lies the map on which we sketched our tour, as we intended. A thin line of red ink drawn from Venice to Trieste, and thence to Vienna, and from there across Germany *via* Nurnberg, Strasburg, and Cologne, shows the extent of our ambitions. But it could not be. We were due home on Tuesday in next week (to-day was Friday), for that Council meeting was to be on the Thursday, and there were other urgencies. Sorrowing, therefore, we had to curtail our wanderings. Next we thought we might descend the Rhine by steamer to enjoy its glories and beauties, but even that was denied us. A long day's journey from Lucerne to Brussels must needs be undertaken to make up for some of our past loiterings. It was sad to flash through at railway speed, but when necessity controls the reins she is a hard driver, and exacts sacrifices.

Still, even through the windows of a train we were able to gather some little appreciation of the delights we were missing, and the long single-sheeted windows of these trans-Germany railways give greater facilities than do our own. We have our own beautiful rivers. The Thames from Oxford to Richmond, the Severn from Shrewsbury to Bristol, the Eden from Kirkby to Carlisle, all beautiful. I should not care to be asked to which of the three, the prize should be awarded. We are proud of them, we love them, after our own fashion. But to the German the Rhine has far more of significance. It is so entwined with the history, both real and legendary, of his land that it is to him almost the same as that land itself. When the Roman conqueror advanced, the Rhine was the boundary of his permanent sway. Beyond were barbaric woods and forests, from whence Teutonic hordes occasionally poured forth to harass his outposts. And that Empire fell. Then each petty princelet seized what portion of its banks he might be able to, and built his castle on the crags above, and round each of these romance has weaved its legend. Each has its tale of weird mystery, of fairy lore, and these incorporated in the poetry of the nation, sung to the babe on the mother's knee, themes of the romance that the schoolboy loves to read, and burden of the warrior's song, these have so entered into the soul of the people that to them the Rhine is Germany. Wise and full of thought were those who, when the war of 1870 broke out, conveyed much of their army by steamboat down the river, regimental bands discoursing inspiring national songs. They knew that men stimulated by such scenes would fight with added fervour.

Our glimpses of the passing country were just enough to make us long for further acquaintance. A few miles through the Black Forest. The charcoal burners we occasionally sighted were some of our old friends we had read of so often in the tales of that world-renowned forest, the hares and the rabbits popped out of their holes as in bygone days; but where were those gnomes in russet raiment, and high pointed caps, belted and pointed shoon with which we had made acquaintance in every picture? Miniature men, working at miniature forges, or dancing impossible dances on rock, or felled oak, to the piping of reeds, flutes, and other sylvan musical instruments, whilst aged sitters-by smoked pipes equal in stem to their own inches. Is it the scream of the whistle and the roar of the passing train which have driven them into deeper shades? Perhaps it is even so. But the forest does not seem the forest without them.

And now we descend to the lower plains. Far as the eye may reach they spread. The beautiful river is now to this side, and now to that.

"Yes, there it flows, forever, broad and still,
As when the vanguard of the Roman legion
First saw it from the top of yonder hill,
How beautiful it is. Fresh fields of wheat,
Vineyard and town and tower with fluttering flag,
And the white hamlet scattered round its base." *The Golden Legend.*

In the broad fields the peasant, arms brown and naked to the elbow, ploughs the land. The cawing rooks follow the track of his share. In the stubble-field where the stunts of the lately gathered grain give scant concealment, the partridge whirrs. The bulging ricks tell of the successful harvest. The cattle 'low from the barn, and the busy frau feeds the fluttering poultry. The children race from the schools which we can see in the villages, and all seems peace.

And the vineyards through which we pass are purple and white with the bunched grapes which the busy gatherers carry in baskets on their backs to the wine-press, for know you not

"At Bacharach on the Rhine,
At Hocken on the Maine,
And at Wriseberg on the Stein,
Grow the best kinds of wine."

Apparently the laugh and the joke pass round, for they seem merry and wave

caps and bonnets to the passing train, and all seems peace.

Seems! But is not so. What is that we note raising the cloudy white dust along the road? The trailing cannon and the accompanying caisson. By the river-side, why that stretch of white tents? Why at frequent intervals the horses tethered in rows, the lance, and the Uhlan's helmet lying on the grass near them? Why at the stations as we pass do we note the "pickelhaube" and the grey coat of the infantry soldier? Surely this is readiness for war.

And the men we meet. We have experienced many lands: France and Italy and Switzerland. To ask was to have, to be given. But our *compagnon de voyage* from Bâle is a typical German, yellow of beard and eyes blue, gross of body, studiedly offensive. The officials of the line scant of courtesy, even grudging of necessary information. The difference was perceptible.

"Coming events cast their shadows before." Our wanderings were in 1913. Twelve months and a few days after the mask had been hurled brutally aside. If we had not tried to believe even against our convictions we might have known of the threatening evil.—J. SMALLWOOD.

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

PROCURING SURPLUS.

(Continued from page 60.)

The honey should be first graded into light, medium, and dark. This can be done by holding the combs up to the light. They can then be extracted in their respective batches, and the honey kept separate. This is very necessary if the best prices are to be obtained for the produce. An indiscriminate mixing of different coloured honeys is a mistake, the result usually being honey of only medium quality, which is difficult to sell and can only be disposed of at a low price; whereas, if grading is carried out, the best honey will sell for a good price, and the other grades can be sold at a lower figure. The total sum thus realised will be much greater than if grading is not carried out, amply repaying the bee-keeper for the extra trouble involved.

An extractor will be necessary. Where only two or three stocks are kept, a single-comb one

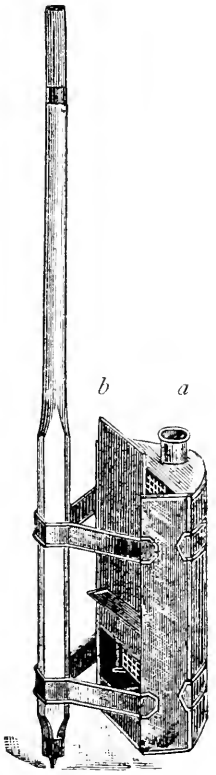


FIG. 65.

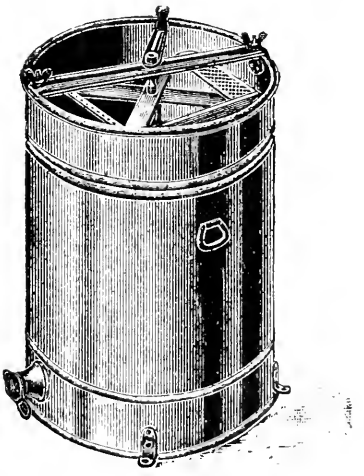


FIG. 66.

called "The Little Wonder" (Fig. 65), manufactured by Messrs. Abbott Bros., Southall, will do the work satisfactorily. It costs new but 9s. 6d., when not in use it takes up little room; the work is slower than with a cylinder machine. The uncapped comb is placed against the wire backing (seen between A and B), the short spike at the bottom is pressed into a hole made in the floor. The loose handle at the top is then gripped with both hands, the operator standing well back from the machine to prevent it knocking against the

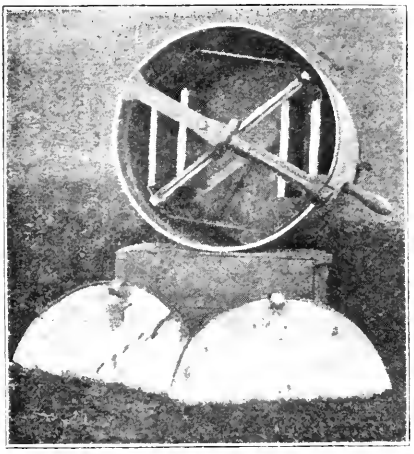


FIG. 67.

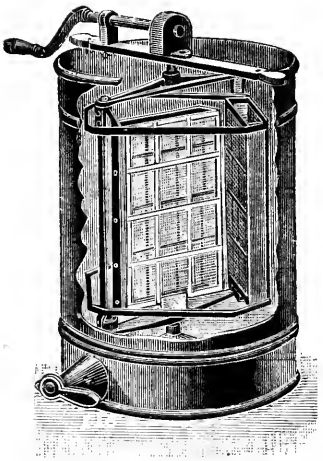


FIG. 68.

shins when revolved, which is done by giving a slight circular motion with the hands. 150 to 200 revolutions per minute can be made with this machine, which causes the honey to fly into the semi-circular can, from which it is poured by a hole at the top. For a small apiary a cheap central drive one (Fig. 66) will do very well. A little more trouble is entailed than if a Cowan (Fig. 67) is used.

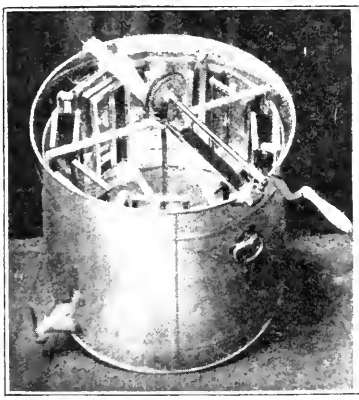


FIG. 69.

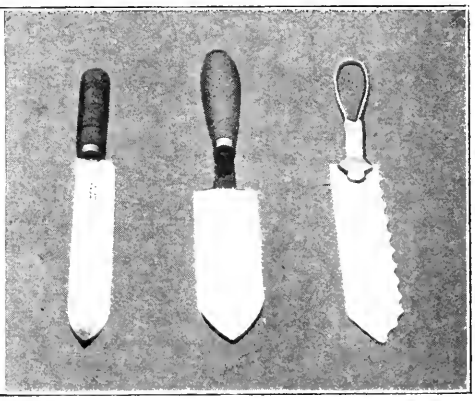


FIG. 70.

The latter is the last word in extractors as it has reversible cages, which do away with the necessity of lifting out the combs to change sides, as with (Fig. 66), this being accomplished by simply swinging the cages over. It also has cog-gearing with a side handle, reducing the exertion of turning to a minimum. (Fig. 68) gives a clear idea of its construction. In a fair sized apiary the Cowan two-comb is indispensable, while in a large apiary the eight-comb one (Fig. 69), made by W. P. Meadows, is a great time-saver. The action of extracting is centrifugal

force properly applied; to prevent the combs breaking, the cages have a small meshed wire backing, against which the combs rest; this is seen in (Figs. 66 and 68).

It will be necessary to have at least a couple of knives with which to cut off the cappings. Ordinary carving knives may be used, but it is better to purchase special ones made for the purpose; these are of several patterns. (Fig. 70) No. 1,

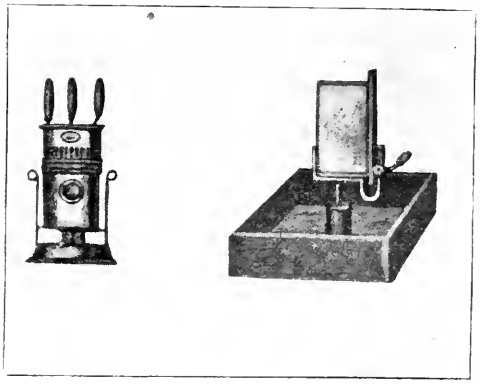


Fig. 71.

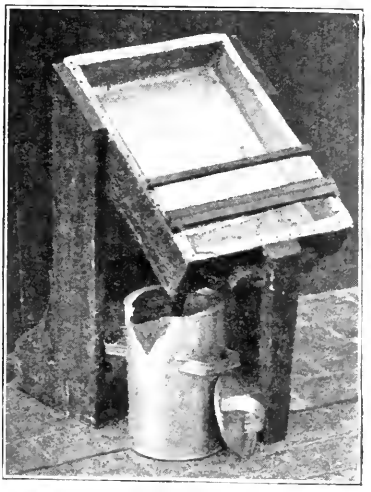


Fig. 72.

a W.B.C.; No. 2, a Bingham; No. 3, one with a serrated blade. Of the three the W.B.C. is the best, it is made flexible instead of very thick like the Bingham, the point is slightly turned up on the broad side, so that cappings can be removed more

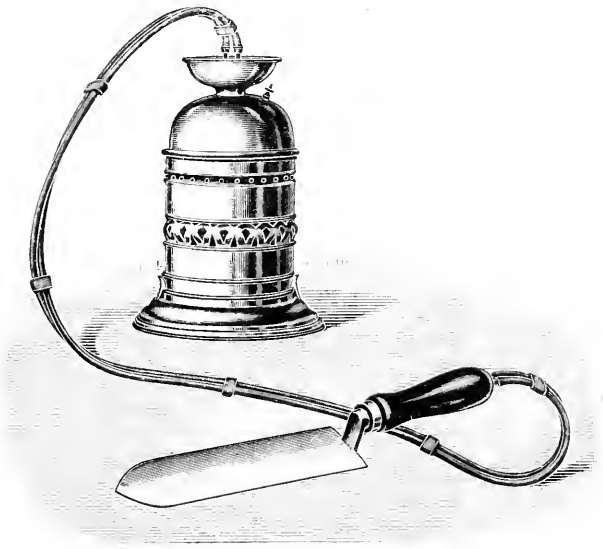


Fig. 73.

easily from the corners or the small hollows in the combs which will sometimes occur. The knives should be heated with hot water, if used cold the comb will be torn and broken. A deep jug can be used for the purpose or the special stove to hold four (Figs. 71, 73, 74, 75). A good sized dish or other receptacle for the cappings to drop into is necessary. A tin tray with comb-holder and a perforated

tin partition for straining, as in (Fig. 71), may be obtained, or an uncapping tray made at home. (Fig. 72) shows one designed and made by Rev. F. S. F. Jannings, F.E.S.; it is fixed at an angle and has a wire cloth strainer three inches from the bottom and a hole in the corner for the honey to drain out

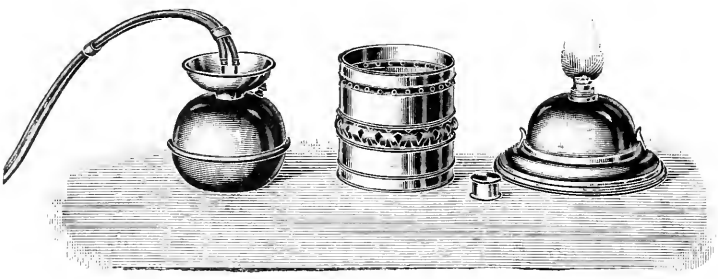


FIG. 74.

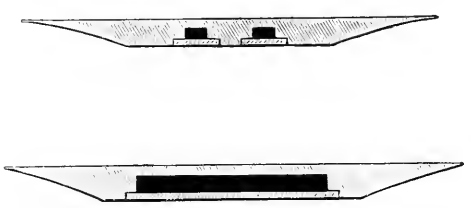


FIG. 75.

into a tin. In very large apiaries one of the several self-heating knives now manufactured expedites the work. (Figs. 73, 74, 75) show one of these and the method of transmitting the steam from the boiler, which is heated with a spirit lamp, through a hollow-bladed knife.

(*To be continued.*)

PRESS CUTTING.

QUEER USE FOR BEE STINGS.

It has long been known that bee stings are of great value in the treatment of rheumatism; but it has only recently been discovered that they are equally effective as a cure for inebriety. The discovery was made by accident in a London hospital, where five men were being treated for chronic rheumatism. Four of them had been hard drinkers for years, and one was a confirmed drunkard. Bee stings were applied, and the rheumatic condition promptly subsided; but when they were discharged it was found that the treatment had done more than cure the rheumatism—it had destroyed their taste for alcohol. Even the sight of drink nauseated them, and since leaving hospital not one of the five has touched liquor. As a result the hospital physicians, astonished at this unexpected dénouement, have made further investigations, and facts already brought to light show that an intoxicated person is quickly sobered by a bee's sting, and that drinking men who take up work among bees, where they are frequently stung, soon lose their old craving for alcohol. Evidently bee culture would be an exceedingly useful adjunct to our inebriate homes.—From the *Lancaster Guardian*.

SOMERSET B.K.A.

ANNUAL MEETING.

The annual general meeting of the Somerset Bee-keepers' Association was held at Bristol on Saturday, February 27th. Mr. T. W. Cowan, F.L.S., presided. About thirty members and friends were present.

The report for the past year was read by the Hon. Secretary. It expressed deep regret at the death of Lady Smyth, who had been the President of the Association since its formation twenty-four years ago.

It also stated that during the past twelve months a large proportion of the

members had suffered great losses through the spread of the "Isle of Wight" disease. In many districts whole apiaries had been completely wiped out, and at the present time there were very few parts of the country where the disease had not made its appearance. It was estimated that quite 50 per cent. of the colonies in Somerset had died out. Many so-called remedies had been tried, but there was no single record of a *permanent* cure. The one redeeming point in reviewing the past season was the excellence of the honey crop (for those who still possessed bees) both as to quantity and quality.

The statement of accounts was brought before the meeting, showing a balance in hand of £19 2s. 9½d. compared with £17 5s. 8d. the previous year. The report and balance-sheet were unanimously approved and adopted.

On the motion of the Chairman, seconded by Mr. Rudman, a vote of thanks was passed to the retiring officials of the association. The Chairman made special reference to the loss the society sustained by the death of the president, Lady Smyth.

Amid much enthusiasm Mr. T. W. Cowan was elected President of the Association for the present year.

The Chairman said he felt it was a particular honour to be made president of the society of the county in which he resided, and regarded it as great as that of being Chairman of the British Bee-Keepers' Association.

The Vice-Presidents and all the Members of Council were re-elected. Mr. R. G. Harris was re-elected Hon. Auditor, and Mr. L. Bigg-Wither Hon. Secretary and Treasurer. Lieut.-Colonel H. F. Jolly and Mr. Eldred Walker were appointed as delegates to the British Bee-keepers' Association.

The Challenge Honey Pot, won by Mr. R. Lane, and Certificates of Merit were presented by the chairman.

The British Bee-keepers' Association Expert Certificates (Preliminary) were gained by Messrs. R. J. C. Ferguson, J. W. Heard, and T. Evans. Mr. J. W. Heard also gained the Intermediate Certificate.

After tea, Mr. S. Jordan gave a very able and instructive lecture, illustrated by many micro-lantern slides, on the life history of *Nosema apis* ("Isle of Wight" disease).

After the lecture an interesting discussion followed, in which Lieut.-Colonel H. Jolly, Messrs. L. E. Snelgrove, J. W. Brewer, and others stated their experiences of the disease. The merits and demerits of many so-called remedies were brought forward, but the consensus of opinion was that at the present time no permanent cure has been discovered.

The complete destruction of affected bees and appliances and thorough disinfection of hives, by fire, was advised.

The result of the Honey Judging Competition, held earlier in the day, was as follows:—1st, Mr. R. Litman, of Castle Cary; 2nd, Mr. H. J. Moore, Radstock; 3rd, Mr. F. W. Owen, Churchill.—L. Bigg-Wither.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

A QUEEN BEE FROM "THE FRONT."

[9129] You will no doubt be rather surprised to receive a queen bee so early in the year as this, and perhaps be more surprised still when you find that she has come from "the Front." As a matter of fact, I've saved her from the Germans. Her eleven other sisters on their big frames, and the hives, have been blown to pieces. The hive I have taken this one from was badly knocked about, all the tops of the frames being exposed to the weather and most of the honey granulated with the cold, yet in such adverse circumstances as these she had a nice patch of brood and eggs, with not a trace of disease so far as I could see. To have left the bees there would mean simply leaving them to die, either by exposure to the weather or the visit of other German shells, which have demolished every house in the village and also the fine old church, which has been a special target for the Huns. I know I am sending you the queen at a rather awkward time, but I thought that (if she arrives alive) you may find some way of preserving her and thus save the last remnant of the fine old French apiary. The strain of bees must be very prolific, as they have such huge brood frames to keep going. I shall have more to tell you of this apiary later.—Lance-Corporal A. G. Atwell.

[Unfortunately our correspondent placed a small piece of comb containing honey in the box with the bees, and during their

journey they became covered with the honey. This, coupled with the cold, was too much for them. The queen was just alive and also five of the workers, but the former was dead ten minutes after the box was opened, although she was promptly warmed near the fire. The five workers became quite lively.—EDS.]

ROYAL SHOW FUND.

	£	s.	d.
Donations already received ...	24	19	0

WAR RELIEF FUNDS.

	£	s.	d.
Donations already received ...	3	6	0

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[8997] *Re-starting after "Isle of Wight" Disease.*—You will doubtless remember I wrote to you last year when my bees were affected with Foul Brood and some stocks with "Isle of Wight" disease. The most stubborn case of Foul Brood I succeeded in curing. In another hive the queen got into the shallow frames, with the result that several of them were packed with drone brood. After getting out the queen I thought I would allow the brood to hatch out, but found it was affected with Foul Brood. As an experiment I cut the combs down to the midrib and placed them on the stock that had been cured to see if they would resist the disease. The combs were worked out and filled with honey towards the end of the season, and the brood-chamber was all that could be desired—not a sign of disease. While this was going on I was also working with Ayles' cure trying to overcome the "Isle of Wight" disease in other stocks, and sometimes, I had hope, as they appeared better.

The time for the autumn driving from skeps in the surrounding villages arrived, and I determined—in spite of all that seemed to oppose me—to work up as many stocks as possible from this source, but all my work, hopes, and bees were doomed to failure, and before Christmas more than twenty out of thirty-one stocks were dead, and I felt that I could not go near the hives after I found out how things were. I concluded I had no bees left until now I find five or six colonies (driven bees last autumn) have been busy to-day. I know they were not well supplied with either combs or stores, and I found out, when too late, they had been clearing out stores from hives affected with Foul Brood and "Isle of Wight" disease. As sugar was so dear I decided to let the lot take their chance, and it is almost a miracle that they have pulled through up to the present.

My aim has been to keep bees enough to pay my rent, and last spring I was proud to think I had got the best lot of bees I had possessed since starting bee-keeping twenty years ago—this spring I feel as though my bee-keeping has come to an end. It is a £40 loss to me, as all my hives, supers, shallow frames, &c., are simply useless lumber. What can I do? I cannot afford to throw more money after that I have lost. My losses are already more than I can see how to get over. My hives are all standing with empty combs and the entrances stopped. I almost dread to put my hands to have anything to do with them, as I feel I may spend a lot of time and then all be lost. I love bee work and should be only too pleased to do all in my power if I could be sure of conquering. What am I to do with all my brood combs, shallow combs, and supers? I am told to-day that two other bee-keepers about a mile from here have lost their bees, and from what I hear of two others less than half a mile away I am afraid they will go the same way—if not already gone.—J. VINCENT.

REPLY.—We are exceedingly sorry to hear of your disastrous experience with bees and also to tell you that there is at the present moment no cure and no known strain or race of bees which is entirely immune from the disease. Your best plan will be to work up and increase from those stocks which, we understand, still remain, in this way it is quite possible you may obtain bees more likely to withstand the disease than if you imported fresh ones. The combs and everything inside the hives of those bees which have died should be

burnt, the hives well scorched out with a painter's spirit lamp, and the drinking fountain should be placed in such a position that it is impossible for the bees to fly over and soil it with their excreta, as the chief means by which disease is spread is water contaminated with the excrement of infected bees being carried into the hive. Your case only shows the necessity for legislation to protect careful men like yourself against those who are careless.

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A. Page (Tattingstone).—*Stimulative Feeding.*—Keep the bees supplied with candy for another fortnight and then feed slowly with thin syrup. A bottle-feeder is the best to use, a good substitute is a Lyle's Golden Syrup tin with the requisite number of holes—about three or four—punched in the lid. The holes should be the right size to just admit a steel knitting needle. Keep feeding until there is forage out of doors and even then during unfavourable weather. You may use pea-flower now with advantage.

C. S. F. (Leicester).—*Dutch Bees.*—You will find the bees you refer to advertised in our issue of February 25th. Dutch bees are not immune, but these and Banats do resist the disease better than most races. They are given to excessive swarming.

Suspected Disease.

Major W. W. H. (Southampton), A. Stratton (Wilts), S. Mitson (Wimbledon), B. Bailey (Sheffield), B. Hurst, K. O. Z. (Ross), and G. Thorpe (Pateley Bridge). It is "Isle of Wight" disease.

M. M. H. (Shepperton).—The bees were too dry for diagnosis.

WEATHER REPORT.

Westbourne, Sussex.

February, 1915.

Rainfall, 5.33in.	Minimum on grass, 17, on 26th.
Above aver., 3.22in.	Frosty nights, 13.
Heaviest fall, .84 on 8th.	Mean maximum, 45.7
Rain fell on 22 days.	Mean minimum, 33.7.
Sunshine, 79.2 hrs.	Mean temperature, 39.7.
Below aver., 11.9 hrs.	Above average, .7.
Brightest day, 23rd. 8 hrs.	Maximum barometer, 30.403, on 26th.
Sunless days, 6.	Minimum barometer, 28.821, on 13th.
Maximum temperature, 48, on 18th and 19th.	
Maximum temperature, 25, on 25th and 26th.	

L. B. Birkett.

TRADE CATALOGUE RECEIVED.

Messrs. Steele & Brodie (*Wormit Works, Wormit, Scotland*).—This firm send a very neat and well got up catalogue. The illustrations are very good, and almost every article listed is also illustrated. This firm are especially well situated for knowing and catering for the wants of those bee-keepers who work for heather honey. We notice that the mistake of naming section *racks, crates,* noticed last year, is still made. Messrs. Steele & Brodie also manufacture poultry appliances. Either catalogue may be obtained post free.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* **1d.** *per word as "***Business***" Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* **3s.** *per* ½*in., or* **5s.** *per inch.*

PRIVATE ADVERTISEMENTS.

SIX dozen shallow frames, fitted drone foundation, wired, never used, 3s. 9d. per dozen; in frame boxes, 1s. 3d. extra; six Porter clearer boards, 1s. 6d. each; large honey ripener, 8s.—ZETA, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, good wax extractor.—Particulars to HORSCROFT, 207, Coventry-road, Ilford. v75

1 CWT. pure Cambridgeshire honey, good colour; sample, three stamps.—H. W. NIGHTINGALE, Doddington, March. v 76

FOR SALE, between fifty and sixty stocks bees, in bar frame hives; also about 100 empty hives and appliances; giving up business through death.—MRS. OWEN, Bee Farm, Risby, Bury St. Edmunds. v 77

FOR SALE, three complete hives (standard sizes), with healthy stocks, full sets waxed supers, queen excluders, bee excluders, feeders. £5.—EARP, Preston Brook, Warrington. v 79

49 STOCKS for sale, in one lot preferred, with or without hives, young queens, owner enlisted.—SERGEANT-MAJOR MASSAM, 6, Kingsley Villas, Surrey-road, Bournemouth. v 78

GIVING UP BEE-KEEPING; few stocks of Goldens, hives, and sundries for sale.—I. H. ANDERSON, 128, Castelnau, Barnes, S.W. v 80

LEMON Rocco and Red Bassano onion plants, single 100 8d., 300 7d. per 100, free.—THOMPSON, Apiary House, Gawdall, Snaith, Yorkshire. v 81

WANTED, strong stock English bees; healthiness and safe delivery guaranteed.—HORBURY, Stanwell, Middlesex. v 82

FOR SALE, light coloured honey, in 14lb. tins, 6½d. per lb.—BURGESS, Newport Pagnell. v 83

SBEE anatomy charts, for lecturing; exchange stock or swarm.—DALTON, Somerset-road, Meadvale, Reigate. v 85

FINEST English honey, 58s. per cwt.; sample, 2d.—DUTTON, Terling, Witham, Essex. v 86

FOR SALE, 1½ cwt. light clover honey.—A. J. NOYES, Pewsey, Wilts v 87

MEAD; 180 gallons old and superior for disposal. — LONGHURST, Longfield, Kent. v 73

FOR SALE 4 cwt. of splendid granulated honey, in 28lb. tins, price 60s. cwt.; sample, 2d.—WM. HOLLAND, Bee-keeper, Swannington, Norwich. v 74

HONEY, white clover, in bottles, cheap to clear; owner guarantees careful packing; 1lb. sample, 9d.—HAROLD COLLIN, Exning, Newmarket. v 72

ON SALE, good microscope; or exchange for bees.—A. FURNESS, Westgate, Halifax. v 69

CRIMSON clove carnations, 2s. 6d. dozen; exchange bees, appliances, books.—MACE, Stow, Huntingdon. v 71

WANTED, twenty stocks, certified healthy, cash; Deposit.—Particulars to "THE BEE-KEEPER," South Yardley Apiary, Birmingham. v 66

GENTLEMAN'S CYCLE, new; exchange bees, appliances, anything useful. — THOS. THIRKILL, Malzeard, Ripon. v 56

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, or exchange, ice safe, 21in. long, 20in. deep, and 16in. wide, wants slight repairs, 10s.; too cheap for approval.—BUMBLE, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

SELL or exchange, good dress suit, 36in. chest, 20s.—DRESS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a complete comb of both a bad and mild case of Foul Brood.—HERROD, "B.B.J." Office.

SELL, Thould and Hutchinson portable cesspool pump, with all fittings, used once only, cost £3 10s.; offers.—"PUMP," "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

WANTED, cloth bound copy "Bee-Keepers' Record," Vol. 7, year 1889.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

LINCOLNSHIRE honey for sale, in 1lb. screw cap jars, 7s. per dozen.—H. CLARK, Chalcedonicum Villa, Spalding. v 84

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d., post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 41

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 6s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

Editorial

OUR NEW MANAGER.

Owing to the tremendous increase of work during the past few years it became necessary in the latter part of last year to make a change in our office staff. Unlike most positions of a similar nature in literary work, where the problem of how to best fill a new post is simple, ours was difficult, owing to the fact that, though an important industry, bee-keeping is followed by a great many on a small scale instead of by a few on a large one. There are therefore very few who have the all round experience necessary to cope with the multitudinous, and variety of, problems submitted for solution and advice. Theoretical knowledge is of no value, even though an individual may have written (?) books telling others how to keep bees, which are mainly composed of cribs from other authors with padding in between. Sound practical knowledge of bee-keeping, honesty, and common sense are the attributes necessary to fill the bill.

MR. J. HERROD-HEMPSALL.

We are pleased to present to our readers in this issue the portrait of Mr. J. Herrod-Hempsall, the only brother of the Junior Editor, who has filled the post of manager since the middle of last year. Sanguine of his ability to carry out the work in an efficient manner, we have

waited thus long for him to prove his capabilities; his sterling work during that period has proved that in an occupation entirely new to him beyond the bee-keeping portion, our confidence was not misplaced. Although of a quiet unassuming disposition, he is well known to many bee-keepers by his thorough and careful work as a touring expert. We give a short history of his life.

Born at Sutton-on-Trent, Notts, in 1870, he, like his brother, was educated at the village Board School, and therefore cannot boast of a collegiate training, but a sound groundwork, to which, by his own exertion, he has added all that is necessary for his present work. He shared all the early experiences of bee-keeping with his brother, and learnt the trade of carpentering with his father, afterwards spending the greater portion of his time amongst the bees.

He took his Expert Certificates as follows:—Third Class in 1899, Second Class, 1900; First Class, 1913.

He has acted as Touring Expert for Notts, Devon, Essex, Kent and Sussex, Lincs and Lancashire Associations, leaving the latter association to take up his present appointment. He has officiated as judge at numerous shows, as an examiner for the B.B.K.A., and is a lecturer of no mean order, his facts being placed in a lucid, fluent, quiet and convincing manner. A good photographer, he has been of great assistance to his brother in preparing the unique collection of over 1000 lantern slides he possesses. That he is a careful student of nature, and a thoughtful and capable writer his articles on "Enemies of Bees," now appearing in THE RECORD, proves.

He took an active part in the parochial affairs of his native village until he left it last year. Apart from bees his hobby is music, and though entirely self-taught, he officiated as organist at the Wesleyan Chapel at Sutton-on-Trent for twenty years.

Our readers and clients may rest assured that with such a manager their requirements will receive that careful and prompt attention in the future which is their due.

GLOUCESTERSHIRE B.K.A.

ANNUAL MEETING.

The annual general meeting was held in Gloucester on February 6th. There was an excellent attendance of members. Mr. M. W. Colchester-Wemyss, Chairman of the County Council, was re-elected President. The following were appointed on the Committee: Miss Liversidge, Miss Worthington (Hon. Secretary of the Berkeley Vale Branch), Messrs. E. H. Bowen and T. E. Swaffield (Hon. Secretaries for the Cotswold and Cheltenham District), Mr. G. A. Calvert (Hon. Secretary for Lydney and Forest of Dean), Messrs. H. E. Scrope Viner and G. S. Railton (Hon. Secretaries for the Tewkesbury District), Mr. R. Holbrow (for Tetbury District), Messrs. E. T. Burtt, E. G. Burtt, G. G. Desmond, W. T. Goodrich, W. F. Pick, and G. N. Walker. Rev. F. H. Fowler was re-appointed Hon. Treasurer and Secretary.

The report and accounts were presented and adopted, the latter showing a balance on the right side, in spite of adverse circumstances.

"Isle of Wight" disease had been prevalent in many parts of the county, but, apart from that, the season was an excellent one, whether as regards the large apiaries on the Cotswold Hills or the smaller ones on the plains. Honey had been plentiful and of fine quality. One small apiary near Gloucester was mentioned, which had produced 830lbs. surplus from seven hives, the two best having given 184lbs. and 182lbs. respectively. It was decided to draw up a leaflet for distribution in the county, emphasising the value of honey as an article of food, and insisting upon the superiority of pure English honey.

After an interval for tea, Mr. G. G. Desmond (first-class expert) read an interesting and instructive paper on the "Fertilisation of Flowers and Fruit Blossoms in relation to Apiculture," which was followed by a discussion.

It has been suggested that a Convention of Bee-keepers in Gloucestershire and the neighbouring counties might be arranged later on for the discussion of bee topics on the lines of similar gatherings which are so popular and successful in America.

NOTTS B.K.A.

ANNUAL MEETING.

The Notts Bee-keepers' Association has for many years carried out a useful work in the county, and is now a flourishing and active organisation with over 300 members.

At the annual meeting held at the People's Hall, Heathcote Street, Nottingham, on Saturday afternoon, there was a large attendance, the Mayor (Ald. J. H. Gregg) presiding. He congratulated the association on its improved position, and hoped that success would continue to attend their efforts. It was a matter for regret, he said, that the "Isle of Wight" disease continued to assert itself, but he trusted that ere long something would be found to stamp out the scourge.

The annual report, presented by the secretary (Mr. G. Hayes), noted that the yield of honey for the county during the past year had been a very fair one: the quality was exceptionally good, and free from the honey dew that was feared would be gathered with it. During the year the association had enrolled thirty-three new members, making a total of 323. At the beginning of 1914 there was a debt of over £3, but this had been wiped out, and there was now a small balance in hand. The association had again been favoured with a grant from the Notts County Council, and by this means had been enabled to send a bee tent and lecturer to several shows. Owing to the "Isle of Wight" disease there was a slight increase of unhealthy stocks. The disease had manifested itself in several localities, and the committee urged extreme carefulness in the matter of trafficing in bees. In view of the fact that the Royal Show was to be held at Nottingham, it was hoped that members would do everything they could in the way of exhibiting, so that the honey section might be a strong one. The annual bee-keepers' show would, it was stated, be held in conjunction with the Royal Show at Wollaton Park.

The benefits of insurance for their bees was impressed upon the members, so that they would have a full sense of security on that point.

Her Grace the Duchess of Portland was thanked for her services as President, and was unanimously re-elected for the current year.

The Committee elected were: Messrs. Adams, Harrison, Derrington, Fox, White, Vessey, Turner, Pugh, Riley, and Dr. Elliot.

Mr. Bickley was re-elected Auditor, and Mr. Hayes Secretary and Treasurer.

Representatives to B.B.K.A.: Messrs Hayes and Pugh.

The meeting then adjourned for tea, to which about 100 members and friends sat down.

After tea, the Secretary lectured on the "Isle of Wight" disease, giving illustrations with photo-micrographic and other slides, whilst Mr. D. Wilson, of Belper, dealt with "The Advance of Apiculture during the Last Century."

Each of these lectures called forth a good deal of discussion, which kept the members well engrossed and extended the meeting to a much longer period than usual.

Mr. Pugh, who presided at the evening meeting, was thanked for his able services.—*Communicated.*

NOTES FROM NOTTS.

With the coming of March the old feelings of interest for our bees come along. Last August, after taking off all the supers, I looked in my stocks, eight in number, and found all very strong. I keep four at home and four at my place of work in the garden. No. 4 hive at home was *very* strong. I went for ten days' holiday. When I came back the strong colony in No. 4 had dwindled, so I wondered what had gone wrong. There is a bakehouse about 300 yards away, and next day the baker, who is a friend of mine, sent for me. He told me what a job he had had with my bees in his bakehouse. There were four men at work there, but only one got stung, and he said that in taking up some buns he trapped one. (I think that speaks well for my bees.) In the mornings they had to clear out very many dead bees. There was a large bowl with the sugar in that they put on the buns. I took it outside; it was one mass of bees, and the sacks of sugar were covered. Fortunately a few cold days set in, and that brought the trouble to an end. I sent for 4lbs. of driven bees as I did not want to lose the stock. Three days before they arrived I was looking at the entrance to No. 4 hive, and instead of them flying off as usual they were creeping about looking snuff coloured. I was very upset. The next day they were worse, so I looked in my Guide Book, and found they answered the description of May Pest, so I treated them with flowers of sulphur. When the driven bees arrived I did not know what to do. I thought the strong bees might carry away the sick ones, so I decided to try my hand and run them in, this being my first attempt at uniting. I opened the hive and separated the frames ½ inch, blew in flour till all the bees were covered with it. I propped up the hive front, opened the box of driven bees, and dusted them all over with flour, and threw them on the alighting board. It was some time before they would run in, the bees from inside meeting them. I had a fine time for half an hour; a lot went in and a lot flew out. Next morning when the sun shone on my garden there were thousands of white spots crawling about. A few came out for several days. I dug them in each day until only one or two were seen crawling. I looked in the hive and found two combs of eggs, so I concluded I had got the young queen. As they had plenty of food I packed them up snugly to take their chance; they have been out often when it has been warm. I have seen just one or two down. Looking in the entrance the other day one "got me" on the nose end in fine style. Now you may think I ought to have burnt them, but as there are no other bees near them except

my own I thought I would try my luck. I had a peep the other day, and they have food and a good number of bees, so I am hoping they may pull through all right.

I live in a village ten miles from Nottingham and about the same from Derby. Potteries, foundries, and mills are all around, so that it is not a great honey district, but, honey or no honey, I am fond of my bees. Last year I had five hives at work, which had been divided from three the year before, and I took 155lbs. of most lovely honey. I sold out in five weeks at 1s. per lb., and have sold 75 lbs. for another bee-keeper friend of mine. I had seven hives in all last year, but two had old queens, and just when the flow came on out went the old queens. I learnt the lesson; no more three year old queens. I divided one very strong stock at the end of the season, making eight stocks, all with young queens, so I am hoping for a good season this year. A farmer friend has promised to let me stand two hives on his farm, two miles away. There is much clover there; I think I shall take them.

I have never missed reading your most valuable little paper for more than three years now; it is so interesting. Pleased to read bits about the war and bees and bee-keepers. My mistress is keeping nineteen Belgians, and I have a great deal to do for them, and have two of them with us at my home.—With best wishes from A LOVER OF THE BEE.

P.S.—If I ask you one question, it is do you think that the stuff the bees got at the bakehouse would upset them, as the "Bee Guide" says improper food would do them harm? In a day or two, when I hope to be better, I will give them a cake of candy.

[It is quite likely the mixture of what would probably be beet sugar, flour, and possibly yeast germs would be detrimental to the bees.—EDS.]

CORRESPONDENCE.

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THE "B.B.J." FOR "THE FRONT."

[9130] If you know of any bee-keeper at "the Front" who would like to have my BEE JOURNAL I would be happy to send it on to him when I have done with it, if you would kindly send me his address.—J. A. BOSWELL, Mount Iver, Sunnylaw, Bridge of Allan.

[Should any of our readers know of a soldier who would like the JOURNAL, will they please send his address on to Mr. Boswell, whose kind offer is much appreciated.—EDS.]

QUERIES AND REPLIES.

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[8998] *Bees Utilising Wax in Foundation.*—Please will you tell me if it is true that the bees draw out the wax sheet you put in the middle of the section and use it, and it alone, for the whole of the wax divisions in the completed comb? I have a friend who has kept bees for years and who insists that this layer of wax foundation remains untouched in the building of the section of honey and is only used as a foundation on which to build the cells. I thought he was wrong, but would like to know for certain. When you cut into a section of honey there is never any thick centre-piece of wax, at least, I have never found one.—MRS. P. (Pickering).

REPLY.—The bees utilise as much of the foundation as possible in making the cell walls, newly secreted wax being added to complete the comb.

[8999] *Chemical Constituents of Chitine.*—Could you kindly give me the scientific analysis of the chitinous substance which forms the wing covers and integuments of bees? I am aware it acts as a framework to the insect, is not soluble in water or spirit, nor acted upon by dilute acids, but could you inform me the component parts of chitine? Chitine is analogous to bone in our own bodies, and we know the composition of the

human bone, can you advise me what is the composition of chitine?—J. NICKALLS.

REPLY.—The chemical constituents of chitine are the following:—Carbon, 45.69 per cent.; hydrogen, 6.42 per cent.; nitrogen, 7.00 per cent.; oxygen, 40.89 per cent.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

P. A. CURZONE (Coventry).—*Mildew on Combs, &c.*—If the *bees* are covered with mildew they are dead. Should there be live bees in the hive remove the damp quilts and replace with dry ones. The mildew may be removed from the combs by means of a 10 per cent. solution of formalin, dip them in, or syringe them with the solution. The mildew on the combs will not harm the bees, but the dampness, of which it is a sign, is detrimental to them.

T. BRIGHT (Weybridge).—(1) You have done quite right in closing them up now. (2) See answer to P. A. Curzone above.

C. D. (Chippenham).—*Disinfecting Hives, &c.*—(1) No, unless the old paint is very thick, when it is better to burn it off. It is better to wash first, preferably with some disinfectant in the water. (2) It is safer to use the lamp. They may be washed with a disinfectant—Izal or carbolic acid—and water. (3) They should be all right if boiled for thirty minutes or more.

A. DONKIN (Pershore).—(1) You may commence in about a week. (2) We cannot say without seeing the bees. It depends on their present strength and condition. (3) Better wait for a week or ten days and choose a warm day for the work. (4) Dutch or Banats for resisting "Isle of Wight" disease, but both are prone to excessive swarming. (5) Owing to the conditions now prevailing we cannot say. (6) You may paint them out with a strong solution of Izal or Calvert's No. 5 carbolic acid and water, and then expose to the air until the smell has disappeared. (7) Keep the hives clean, well ventilated, and supplied with disinfectants. Lime and dig the ground round the hives occasionally, or sprinkle it with carbolic acid or other disinfectant and water. Medicate any food given with quinine or one of the other advertised "remedies"—they may act as preventives. Most important of all, make certain that the bees have a pure and uncontaminated water supply.

ENQUIRER (Feltham).—The discolouration is caused by breeding; the insects are pollen mites.

Suspected Disease.

MISS F. P. (Melton Mowbray), S. FAIRCLOUGH (Barnsley), MISS I. S. C. (Farleigh), C. F. C. (Essex), R. Eddy (Blanchland).—It is "Isle of Wight" disease.

J. GIBBINS (Barnt Green).—The bees are suffering from "Isle of Wight" disease. The probability is they have been infected by the robbing, this and the fermented food would cause the disease. You might follow the plan you suggest, and medicate with quinine. Your case is another instance of the need of legislation.

E. H. H. (Tipton).—The bees were too dry for diagnosis. Your theory is probably correct. The queen has not mated.

HONEY FOR OUR SOLDIERS.

We understand the Government have purchased 16 tons of Australian honey for the troops at the front. It is being put up in 1lb. tins and packed in boxes for despatch to France.

Special Prepaid Advertisements
Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1d. *per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS.

WANTED, two stocks, skeps or bar frame.—Quote price to J. CRAWTER, Claygate, Surrey. v 88

BEE FARM.—100 stocks, sheds, extractors, frames, weed foundation, colonies healthy, owner in France, going concern or for removal; offers wanted.—Write, RIDLER, Dunster, Somerset. v 89

FOR SALE, three strong stocks of bees, in good hives, certified healthy, 30s. each.—J. COLECLOUGH, No. 5, High-street, Hirwain, near Aberdare. v 90

WANTED, strong stock of bees, guaranteed free disease; immediately.—MARRIAGE, Boughton Park, Worcester. v 91

HIVES and appliances, cheap, or exchange.—104, Churchill-road, South Croydon. v 92

HONEY, first quality sections, 7s. 6d. dozen, three dozen 21s., cash with order.—R. COUSINS, The Rosary, Misterton, Gainsborough. v 93

FOR SALE, forty stocks of English Blacks, healthy, and in splendid condition; open to inspection by expert; stamp for reply.—H. TURNBULL, The Apiary, Norton, Malton.

WANTED, stocks of pure Carniolans or Italians, 1914 queens.—HUTCHINSON, Bryarwood, Kendal. v 96

FOR SALE, two stocks bees, on standard frames, forward condition, guaranteed healthy, 25s. each.—IRVING, Galabank Apiary, Annan. v 97

SEVERAL stocks of native bees for sale, healthy.—W. THOMAS, Cwmdurgi, Mydrun, St. Clears. S. Wales. v 98

UTILITY White Wyandottes, trapnested strain, eggs 3s. sitting.—BROWN, 20, Temple-street, Wolverhampton. v 99

FOR SALE, two healthy stocks of bees, on ten combs each, 25s. each on rail.—Apply, E. ROCKE, Clungunford House, Aston-on-Clun, Shropshire. v 100

FOR SALE, three hives bees, guaranteed healthy extractor and appliances; particulars.—GILBERTSON, 43, High-street, Annan. v 1

FOR SALE, between fifty and sixty stocks bees, in bar frame hives; also about 100 empty hives and appliances; giving up business through death.—MRS. OWEN, Bee Farm, Risby, Bury St. Edmunds. v 77

FOR SALE, three complete hives (standard sizes), with healthy stocks, full sets waxed supers, queen excluders, bee exeluders, feeders, £5.—EARP, Preston Brook, Warrington. v 79

49 LINCOLNSHIRE STOCKS for sale, in one lot preferred, with or without hives, young queens, owner enlisted.—SERGEANT-MAJOR, 6, Kingsley Villas, Surrey-road, Bournemouth. v 78

GIVING UP BEE-KEEPING; few stocks of Goldens, hives, and sundries for sale.—I. H. ANDERSON, 128, Castelnau, Barnes, S.W. v 80

LEMON Rocco and Red Bassano onion plants, single 100 8d., 300 7d. per 100, free.—THOMPSON, Apiary House, Gawdall, Snaith, Yorkshire. v 81

MEAD; 180 gallons old and superior for disposal.—LONGHURST, Longfield, Kent. v 73

FOR SALE 4 cwt. of splendid granulated honey, in 28lb. tins, price 60s. cwt.; sample, 2d.—WM. HOLLAND, Bee-keeper, Swannington, Norwich. v 74

ON SALE, good microscope; or exchange for bees.—A. FURNESS, Westgate, Halifax. v 69

CRIMSON clove carnations, 2s. 6d. dozen; exchange bees, appliances, books.—MACE, Stow, Huntingdon. v 71

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, or exchange, ice safe, 21in. long, 20in. deep, and 16in. wide, wants slight repairs, 10s.; too cheap for approval.—BUMBLE, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

SELL or exchange, good dress suit, 36in. chest, 20s.—DRESS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a complete comb of both a bad and mild case of Foul Brood.—HERROD, "B.B.J." Office.

SELL, Thould and Hutchinson portable cesspool pump, with all fittings, used once only, cost £3 10s.; offers.—"PUMP," "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

WANTED, cloth bound copy "Bee-Keepers' Record," Vol. 7, year 1889.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 6s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

FOR SALE, cheap, recipes for all bee diseases, "I.O.W.", &c., &c.; disinfectants, anti-stings, &c.; also small stock of apparatus and chemicals by analytical and bacteriological chemist.—Box No. X., "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 94

BRITISH BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The Annual General Meeting of members was held in the Lecture Hall of the Zoological Society of London, Regent's Park, on Thursday, March 18th, 1915. The attendance was exactly the same as in 1914, which is most satisfactory when prevailing conditions are taken into account, together with the absence of cheap railway bookings.

In the absence of Mr. T. W. Cowan and Mr. W. F. Reid, Col. H. J. O. Walker was unanimously voted to the chair. The Chairman said they would all regret the absence of Mr. Cowan—for the first time he has missed attending an annual meeting when not abroad—the more so on account of the cause, which was the serious illness of Mrs. Cowan. He moved, and it was carried, that the members of the British Bee-keepers' Association assembled at the annual meeting express their sympathy with Mrs. and Mr. Cowan in the illness of the former, and trust that she may soon be fully restored to health.

The minutes of the previous Annual General Meeting, held March 19th, 1914, having been read and confirmed, the Chairman said: As you have all received a report, and as I did not anticipate having to fill the chair, it will be unnecessary for me to say very much upon the Report for 1914. As was to be anticipated, the membership has gone down somewhat, and also a few of the Associations have had to suspend their affiliation for a time. All this will be altered when peace and prosperity reign again. The experts' report is like the rest of the report—short and to the point—but it is satisfactory to note that the "Isle of Wight" disease has not made its appearance at Swanley again. The examinations have been most satisfactory, and also those exhibitions which have been held.

I note with regret the death of Dr. Wardleworth. I daresay he is not the only bee-keeper who has succumbed to the situation. It is to be hoped there will not be many more.

I am pleased to see that the first W. Broughton-Carr Gold Memorial Medal has been struck. It is a thing I have always taken great interest in, and the presentation is to be made to-night. Turning to the accounts, I there find no particular question to raise. They appear to me on the whole very satisfactory indeed. There has been somewhat of a decrease in the subscriptions owing to the war. We must all do our best, and give what money we feel that we can afford, and try and continue, and, if necessary, increase our subscriptions.

Gen. Sir Stanley Edwardes: I rise again, as I did last year, to propose that the Report and Balance-Sheet should be passed. I have little to say on the subject as they are very satisfactory, and the accounts wholly are better than last year. I have much pleasure in proposing that they be adopted as read.

Mr. Judge seconded, and the resolution was carried unanimously.

Mr. Heap proposed a hearty vote of thanks to the retiring Council and Officers.

Mr. Bayden seconded the proposition, and it was carried with applause.

The Chairman proposed the re-election of the President, Vice-Presidents, and Honorary Treasurer, Analyst, Solicitor, and Foreign Corresponding Members, and that they be thanked for their services. As the Auditor acting last year had resigned it would be better, for the moment, to leave out his name in this resolution.

Mr. Hayes seconded the proposition, and it was carried.

It was resolved that the matter of electing an Auditor for the Association be left over till the next General Meeting in October.

Sir Ernest Spencer said that Mr. Morrish resigned on account of some of his staff being absent on active service, and not because he was tired of us or did not like the work.

The Chairman: If no one has any objection I should like No. VII. on the agenda to be taken next. I notice that it affects the voting.

Mr. W. Herrod-Hempsall: The motion is made simply to make the rules consistent, which at present they are not. By reading Rule IV. it will be seen that annual subscribers are entitled to one vote for every five shillings subscribed up to four, and life members are entitled to four votes. I fail to see how a member can hold up four hands, therefore I move that the words "show of hands" shall be replaced with the word "ballot."

Mr. Lamb thought perhaps it would be better to say, "shall be by show of hands, or ballot."

Col. Walker did not think it a good suggestion, as one person might desire "show of hands" and another person wish it by "ballot"

Mr. Herrod-Hempsall said he was willing to amend his resolution to read: "Shall be by ballot if the number of candidates exceeds 21."

Sir Ernest Spencer seconded the motion, which was carried unanimously.

The Chairman said before No. 5 on the agenda was taken he would call upon the Secretary to read a letter which had been sent by Mr. Cowan to the Council Meeting held in February, they considered it too important to be dealt with by them, so they had referred it to the Annual Meeting. The letter was read as follows:—

Upcott House,
Taunton,
17th Feb., 1915.

DEAR MR. REID,—It was in 1874, the year that the British Bee-keepers' Association was founded, that I was elected Chairman of the Committee, and have been re-elected annually to the same position in the Association to the present time. I have on several occasions asked the Council to accept my resignation, but have conceded to their kind wish for me to retain the position a little longer. Now that I have served the Association in this capacity for more than forty years, and as I am over 75 years of age, I feel that this is the right moment to retire, and I would therefore ask the Council to kindly accept my resignation. In doing so I feel that I must express my gratitude for the unvarying generosity and kindness with which the Council have always treated me during the forty years of my association with them. I have seen many changes, and believe I am the only survivor of the original twenty-eight Vice-Presidents and of the Committee elected at the first meeting of the British Bee-keepers' Association on 10th Sept., 1874. It is not often that a chairman is able to retain the confidence of his colleagues for so long a time, and I feel that I have been highly honoured by them in this respect.

I wish also to thank Mr. Reid, who has so ably filled the post of Vice-Chairman, and other members of the Council for so willingly carrying on the work during my absence with which I feel that I am now not sufficiently in touch. Our relations have always been of the pleasantest, and I would assure the officers and Council of the regard and esteem I entertain for them, and hope that they will not relax their efforts in continuing the good work which has so long been carried on by the Association, and which has resulted in bee-keeping becoming one of our staple industries.

Believe me,
Yours faithfully,
THOS. WM. COWAN.

Mr. Reid: I propose that Mr. Cowan's resignation be not accepted. This Association owes its origin to Mr. Cowan, I believe, and since the child began to exist and extend he has nursed it, and ever since it has had the advantage of his thought and care. His assistance has always been available for us, and I feel sure it is only a measure of justice to ourselves, as well as to Mr. Cowan, to retain his name if he is willing. I feel quite sure that this meeting authorises us to communicate with Mr. Cowan and say that his services to the Association have been so great that we will be unable to carry on in the absence of his name, therefore we will be doing an act of justice to him, and it will be a very good thing for ourselves, if we do not accept his resignation if it can possibly be avoided. (Applause.) I move, therefore, that Mr. Cowan be communicated with and asked to re-consider his resignation. (Applause.)

Mr. Lamb: I have much pleasure in seconding the proposition.

Col. Walker: Mr. Cowan's position is one so absolutely unique no exception can be taken to Mr. Reid's motion, with which I am in full agreement.

The resolution was carried with loud and continued applause.

Mr. Lamb: Why not press Col. Walker to reconsider his resignation?

Col. Walker: It is very kind of you, and I fully appreciate your sentiments. It is impossible for me to alter my decision to retire. I cannot attend the meetings, therefore with any self-respect I cannot continue. I shall always take an interest in the Association, and do whatever I can for it in the future as I have in the past.

Mr. Eales proposed that Col. Walker be made a Vice-President so that he would still be able to attend Council meetings when an opportunity presented itself.

Rev. Jannings seconded the motion, which was put by the Secretary, and carried with acclamation.

Col. Walker: I feel very much honoured, especially as it has been carried so enthusiastically.

Mr. Lamb proposed, and Sir Ernest Spencer seconded, that instead of being elected as a Councillor Mr. Jonas should be given his full honours as Treasurer, which carried with it a seat on the Council. This was carried unanimously.

The number of condidates for the Council being one in excess of the number required, General Sir Stanley Edwardes wished to withdraw, but the meeting unanimously opposed this, and the ballot was taken. Col. Walker and Mr. C. H. Bocock acted as tellers, and declared the following members elected:—Miss M. L. Gayton, Miss M. D. Sillar, Messrs. T. W.

Cowan, W. F. Reid, R. H. Attenborough, T. Bevan, General Sir Stanley Edwardes, Messrs. C. L. M. Eales, G. S. Faunch, G. J. Flashman, J. Herrod-Hempsall, Rev. F. S. F. Jannings, Messrs. G. W. Judge, J. B. Lamb, A. G. Pugh, A. Richards, Sir Ernest Spencer, Major F. Sitwell, Messrs. J. Smallwood, E. Walker, and E. Watson.

Mr. Smallwood then proposed that, "annual subscribers of one guinea and over shall be Vice-Presidents of the Association" be added to Rule IV.

After a full discussion it was proposed that the words "eligible as" be inserted to read: "Annual subscribers of one guinea and over shall be eligible as Vice-Presidents of the Association."

Mr. Smallwood agreed to this, and after being seconded by Rev. F. S. F. Jannings, the resolution was carried.

Presentation of the W. Broughton Carr Memorial Medal to J. Berry.—Mr. Berry was unable to be present, but sent a letter of regret in which he said: "Although I have been awarded over 600 prizes and over 20 medals for honey and wax I appreciate the W. Broughton Carr Gold Memorial Medal more than all of them."

Col. Walker, after instructing the Secretary to post the medal, said: I note with pleasure that this fund has started in a practical way to perpetuate the memory of a friend and bee-keeper, whose memory I shall always cherish. I am delighted to see the matter in order, and I hope that as long as the Association exists Mr. W. Broughton Carr's name will be held in constant esteem.

Mr. W. Herrod-Hempsall said he had a proposition to make with regard to the new certificates for proficiency in bee-keeping which have been prepared and designed. We have been very fortunate in having amongst our councillors an artist of no mean merit who has very kindly given a great deal of time and trouble to the work. As Secretary I can assure you that all who have received them have expressed their delight with them. Mr. Harper has done the work as a labour of love, and has given many days to the designing and drawing of the originals. He has given all that is best in him as an artist and an enthusiastic bee-keeper. Therefore, the certificates are more than works of art for they are symbolical of the art and craft of bee-keeping, as will be seen upon an inspection of the designs. So keen has he been on getting as perfect a result as possible that he has gone further than the ordinary artist by actually working upon the printing blocks with the graving tool himself. The least we can do is to see that a record of the thanks of the members of this Association passed—as I am sure it will be—at this Annual Meeting to Mr. Harper for his service be recorded on the minutes. I propose that this be done. The motion was seconded by Sir Ernest Spencer and carried with applause.

Mr. Pearman proposed, and Mr. Smallwood seconded, and it was carried, that the list of holders of Final Certificates in the report be confined to members of the British Bee-keepers' Association and those affiliated thereto.

This concluded the business of the meeting, the members then adjourned for tea, after which Mr. G. Hayes, of Beeston, gave a most instructive illustrated lecture on "The Separation, Examination, and Photographing of Pollen Grains from Honey," a report of which will appear later.

BRITISH BEE-KEEPERS' ASSOCIATION

The Monthly Meeting of the Council was held immediately after the Annual Meeting. Mr. W. F. Reid presided, and there were also present Col. H. J. O. Walker, Rev. F. S. F. Jannings, Sir Ernest Spencer, General Sir Stanley Edwardes, Messrs. C. L. M. Eales, G. W. Judge, A. G. Pugh, G. J. Flashman, G. S. Faunch, J. Herrod-Hempsall, J. B. Lamb, J. Smallwood, and T. Bevan; Association Representatives, G. Hayes (Notts), F. W. Harper (St. Albans), G. Bryden (Crayford), Col. H. F. Jolly (Somerset), G. R. Alder (Essex), and the secretary, W. Herrod-Hempsall.

Letters of regret at inability to attend were received from Miss M. D. Sillar, Miss Gayton, and Dr. Anderton.

The minutes of Council Meeting held February 18th, 1915, were read and confirmed.

The following officers were elected:—Chairman: Mr. T. W. Cowan; Vice-Chairman: Mr. W. F. Reid; Finance Committee: Messrs. R. H. Attenborough, T. Bevan, G. Bryden, C. L. M. Eales, G. S. Faunch, J. B. Lamb, A. Richards, J. Smallwood, Sir Ernest Spencer, E. Walker; Exhibition Committee: Messrs. G. R. Alder, T. Bevan, F. W. Harper, Rev. F. S. F. Jannings, A. G. Pugh, Major F. Sitwell, Messrs. E. Watson, E. Walker, Miss M. D. Sillar; Publication Committee: Messrs. T. Bevan, C. L. M. Eales, J. B. Lamb, W. F. Reid, J. Smallwood; Board of Examiners (for paper work, Intermediate and Final Examinations): Messrs. T. W. Cowan, D. M. Macdonald, W. F. Reid, Col. H. J. O. Walker; for Lecture Test: Messrs. T. W. Cowan, C. L. M. Eales, G. J. Flashman, W. Herrod-Hempsall, G. W. Judge, J. B.

Lamb, D. M. Macdonald, A. G. Pugh, W. F. Reid, A. Richards, Sir Ernest Spencer, Mr. J. Smallwood, Col. H. J. O. Walker, Mr. E. Walker; Emergency Committee: Messrs. J. B. Lamb, W. F. Reid, Sir Ernest Spencer.

Payments amounting to £35 were passed.

The dates of Council Meetings for 1915 were arranged for the third Thursday in each month, except August, when no meeting will be held; in July, when the meeting will be at the Royal Show, Nottingham, on July 1st, and in October, when it will be on October 21st (Thursday) in Dairy Show week.

The following new members were elected:—Mrs. K. M. Ward, Rev. C. Willoughby Bean, Messrs. W. R. Allen, G. W. Horscroft, and G. J. Jenkins.

The following nominations of representatives from affiliated Associations were received and accepted:—Aberdeen, Mr. A. H. E. Wood; St. Albans, Mr. F. W. Harper; Somerset, Col. H. F. Jolly; South Staffs., Mr. Talbot Clayton; Notts., Mr. G. Hayes; Surrey, Mr. J. Kaehler.

Next meeting of Council April 15th, at 23, Bedford Street, Strand, London, W.C.

BLURTS FROM A SCRATCHY PEN.

BRUSSELS AND WATERLOO.

The shades of evening were fast descending as we entered Belgium. At Aix-la-Chapelle we crossed the frontier. Shall I attribute it to German "kultur" or cussedness, but whenever in Rhineland I spoke of "Aix-la-Chapelle," the French title of the town, it provoked an incomprehensive look, the German name, "Aachen," seemed that to which they had been educated. Drilled into, possibly, is more correct. Just a few glimpses of a flat land patched, here and there, with the vivid colours of autumn flowers, where the seed and plant-growers had their farms, and the wooden-shoed labourers returning from their toil, was all we could see through the gloom of the evening. But in the western sky the sun had set 'neath banks of crimson clouds. Crimson, deep and dark, shading almost into black, angry and tempestuous, for the gathering cumuli threatened a storm on the morrow, and fitful flashes of summer lightning, rapidly succeeding, edged out their bold outlines against the firmament behind. That sunset I shall ever remember. Of course, similar autumn sunsets have occurred endless times before, and will occur again. Yet, looking back on the events which have occurred since then, it might almost have been prophetic. Twelve months after, almost to a day, over the very landscape on which I was then gazing, there were again clouds piled up, reaching, aye, even to the sky, but they were the clouds of smoke rising from burning villages, from the homestead and farm, ruthlessly, hunnishly, destroyed, And the flashes? No, not heaven's artillery, they were the flashes of the roaring cannon and the exploding mine.

A train preceding us, derailed, delayed our arrival at Brussels until late. This, fortunately, was our sole mishap in all our long journey, and to add to our discomforts the hotel at which we had arranged to stay was filled to repletion. There had been a big influx of excursionists, so that we had to search for other quarters. However, in this we were soon successful.

I like, if possible, to see a town in the early morning. If you are up betimes you see it *en déshabillé*, before it has prepared itself, washed its face for its visitors. You see something of its inner existence. And so it was that I was wandering about old Brussels just as the market gardeners were bringing in their produce, just before the busy shops commenced to deck themselves for attraction and extraction. It is the same with London or Paris. Bond Street or L'Avenue de l' Opéra in Paris at 8 and 12 o'clock in each day are quite differently populated. Now, here in Brussels, it is 7 o'clock, I meet the workman and mentally note where he assimilates and where he is different to his fellow over the water. There! that is the "patron" of the "magasin." You may easily pick him out. He is anxious looking, gesticulates rapidly, and almost always, waxes corpulent between the thirties and forties, but he is a good and affectionate husband and father. Is it difficult to guess where that neat and graceful mademoiselle is going to? Her dress is ever so tasty. I don't know why, but it is art, and nothing else. Anything she may choose to wear becomes her. Sackcloth and ashes would be charming if she had the arranging of them for a costume. Her associate and herself attend us when we make our purchases.

But this morning what amuses me much is the use the Belgians make of dogs. You meet a kind of miniature cart in the shafts of which a dog is harnessed, often of the retriever species, or it is a handtruck to which the animal is fastened, helping to drag the load, and very patient the poor brutes seem, and to understand well what is expected of them. We had all along decided to spend the last day of our journey on a visit to Waterloo. Just a short journey by train from Brussels lands us at Braine le Comte, the station for the battlefield. I presume

many of my readers have paid it a visit; it is so near home. Candidly, I felt disappointed. I had always depicted a much larger area for such a struggle. A modern rifle would carry across from east to west or north to south. But there it was. An undulating field from which but recently a harvest of corn had been reaped, marked here and there with monuments of those who had fallen and were buried there, with other thousands, friends and foes. The grim grey old château of Hougomont still bears the marks of round shot and bullet, the embrasures are there through which the cannons pointed, and the tenants of the farm show muskets and relics of the fight. They even offer you bullets said to be disinterred, but, I am sorry to say those we saw bore traces of a more modern fabrication. We felt pride in visiting the scene of such a victory: we felt sorry for those who had fallen, but we also wondered why wars must be.

The storm threatening the evening before broke. The rain came down in torrents. Yet, when it cleared up, we were able to visit that grandly sad monument "To the last combatants of the Grand Army." It is an eagle wounded to death, and is erected where the last struggle occurred. We wandered back by La Belle Alliance mentally reconstituting the famous meeting of the two great generals, and so back to Brussels, drenched by the rain. I am afraid we looked somewhat seedy. Our boots and our trousers were so thick with the mud which adhered, we might have returned from a real battle.—J. SMALLWOOD.

The May Queen (p. 40).—If there be anything in this theory of "dynamic energy" (and that, if not a misnomer, must be first cousin to the famous bull "De Kol II.") it would seem to bear out Mr. Desmond's speculation that early queens, raised under the natural swarming impulse, are the best. Which is precisely what some few of us "retrograde writers" have maintained in spite of abuse. This is not to say that something like the required conditions cannot be reproduced with care, nor that queens raised artificially are not good enough for utility purposes. But they can never be better than the best of naturally reared queens, and the chances are in favour of the natural queen as a breeder.

A Profitable Driven Lot (p. 41).—Mr. Bowen says: ". . . if this driven lot had been a full colony the return might have been double." This may mean either as an established stock or possibly that the driven bees were to have covered more frames. But in either case, I suggest that the conclusion is not justified, except as a mere statement of possibility. To have given a double yield more supers would have had to be occupied on "May 19th," which would be remarkable in itself. For it is not the size of the autumn colony which is so important as the size and vigour of the spring colony. In other words, the real factor is the wintering quality upon which I have constantly laid stress. Now I have found driven bees sometimes come out ahead of established stocks in this respect. In the management of this particular colony, Mr. Bowen has struck precisely the conditions which gave me the best results, viz., a vigorous lot wintered upon a small number of frames, or the equivalent area of about five standard frames. A lot of experience with driven bees has shown me that large lots do not necessarily come out in spring stronger than medium lots well packed up on four frames. There may be something in the hardiness of occasional hybrids, but I get better average results from a good wintering strain of our native bees, to which I still pin my faith.

Honey Judging Competitions (p. 45).—I am obliged to "Exhibitor" for his compliment, but I am hardly prepared to accept it as deserved. In fact, I am feeling exceedingly humble as a result of the said competition, which may in itself be no bad thing! "Judges of Experience" ought to be able to name the sources of honey samples, and until we can do so we have still something to learn. That such failures disqualify for the show bench I should deny, for quality rather than source is the subject of test there. And I am prepared to back my own judgment. I am, for instance, quite unconvinced as to the merit of the second award, and only sorry for those who failed to detect fermentation. I beg your pardon, I really meant to be humble! I trust that the sample has not been destroyed, when I am confident that time will prove the point. But I had no intention of raising the side issue of criticism of the Dairy Show judge by my mention of his independent conclusion, which agreed with my own, and I offer him my apologies for the fire to which he has been subjected as a result. I shall, however, have something to say to him later on the subject he has raised.

A Smoker Plug (p. 49).—It seems difficult to write sufficiently clearly; someone or other unaccustomed to the precise use of language is sure to misunderstand.

But that D. M. M., a man of some scholastic attainment, should do so is difficult to explain. I make a perhaps mistaken endeavour in this critical column to condense phrases and to avoid verbose extension, to get, if I may say so, as much meat into the sandwich as is palatably possible. This may account for the difficulty. However, D. M. M. misses the point of my criticism, which he quite wrongly describes as captious, and which was directed, not to the use of a plug, but to the method of its attachment to the smoker. I use a plug. I keep it on the smoker shelf. I find it very useful. When at work I often use a plug of grass. But I should intensely dislike a "creosoty" plug dangling from a string. Mr. Low's suggestion is an improvement, but a better plan would be a wire loop on the top of the bellows near the nozzle, on the side not usually held by the hand. Of course, the idea of plug for smokers is by no means new. Every navvy is obtrusively familiar with it!

A Serious Subject (p. 50).—I am sorry that my jesting reference should offend Mr. Heap. I did not jest about "I.O.W." disease, but about an imaginary microbe which Mr. Heap desired another correspondent to produce (p. 346, Vol. 42). I hope that is at last clear. But I see no reason why I should refrain from jesting with disease, why I should not jest with death if I choose. Rather an admirable proceeding than otherwise if one could do it. However, I will take Mr. Heap seriously in the matter of disease legislation. I welcome his entry into the arena, and will await the actions which are to follow his brave words with such patience as may be. If I can remember to do so, I will refer to the matter twelve months hence, or at such later period as he may suggest, when I hope to be able to record appreciation of the results of his organisation. I shall even be glad to subscribe towards his expenses in the matter, a practical step which, so far as I know at present, he failed to take towards any of the organised attempts to secure legislation, either Mr. Cowan's, Mr. Saunders, or my own. I shall be glad to be corrected if I wrong him in this.

Home-made Hives (p. 51).—My newest hives are very much on the lines suggested by Mr. Bowen. All my hives are square, which allows of frames being hung in either direction. They can be at right angles during the season and parallel with the entrance during the winter if desired. With the combination hive, if worked as a single stock, the entrance is perhaps best at the end, but several manipulations become possible if the entrance is adjustable to any point on the long side. Sawing wood for hives is not hard if the saw is in perfect condition. Use a tenon saw for the cut across the grain, and see that the saw teeth are set truly and sufficiently. Sawing should require no great effort, neither should it be difficult to saw truly down the line. But it is best to allow a fraction for planing down the end wood. A metal plane is the best for the work, but a "trimmer" is the ideal tool for the job. Don't forget to paint both parties to the joint before nailing up. This is vital to the life of the home-made hive.

BEE-KEEPING AND SUNDRIES.

It is quite time now to take a peep into the hives, just to note that the bees have sufficient food.

March and April are two of the most critical months of the year, especially in hilly districts where little honey is gathered before the end of May. Just peel back the quilts, with perhaps a puff of smoke to drive away the bees, and if there are capped or sealed stores on three or four combs the colony is safe in its food supply.

But if you only notice a little honey along the top of one or two frames it is quite time to start the feeder going.

A pint of warm medicated syrup given rapidly will put the bees in good heart, and encourage the breeding of plenty of young bees ready for the April blossoms. Whether the syrup should be given slowly or fast is just a matter of opinion; but, with me at any rate, the rapid method succeeds best, providing it is not overdone. One pint of syrup will suffice for a week or ten days, when another generous feed can be given with advantage.

As the bees increase in numbers smaller quantities of syrup given oftener will fully provide for the increased population.

A bee-keeping acquaintance who makes a practice of feeding like this each spring, always secures a good yield, no matter what the season may be. A really powerful stock will store as much as 50lbs. of honey in one week of fine bee-weather, and when hives are boiling over with bees they are fully prepared to take advantage of the flow whether it comes in early June or late July.

Spring feeding pays without doubt, and every bee-man should feed regularly from, say, April 1st till the honey flow, or at least until the bees can provide for their needs themselves.

The past winter has been most favourable for bees—neither too cold nor too mild—and I believe that if we prepare for and expect another good season we shall certainly do better than if we didn't get ready.—A. H. Bowen, Coronation Road, Cheltenham.

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

Procuring Surplus.

(Continued from page 80.)

The extracting should be done in a warm bee-proof room. A cloth to wipe the knives upon should be provided, this should be laid on the right-hand side of the receptacle for the cappings. Place the knives in the hot water, and when

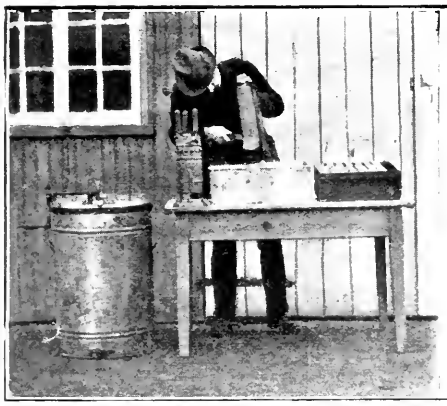


Fig. 76.

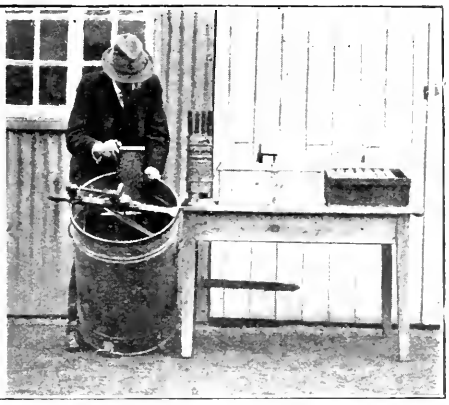


Fig. 77.

warmed through work can be commenced. Take a comb, rear it end up with the top bar towards the operator, lean the top slightly forward and commence to cut from the bottom with a see-saw motion (Fig. 76). The inclination of the comb will allow the cappings to drop clear from its face. The cappings should be cut thinly;

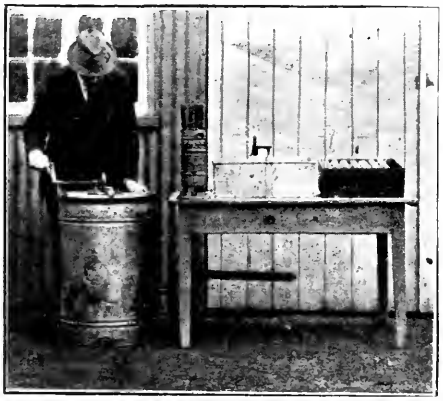


Fig. 78.

Fig. 79.

with practice it will be possible to remove them with very little honey adhering, by cutting through the air-space which exists between them and the honey. They should be cut off in an entire equal sheet so that the combs are kept perfectly

straight. The other side is then treated in a similar manner and the knife replaced in the water, the second one being used for the next comb, and so on. When the knife is removed it should be wiped on the cloth before using, to remove the water, otherwise the constant addition of only a few drops of moisture to the honey will spoil its density. The combs are then placed in the cages of the extractor in such a position that when re- volved the bottom bar leads (Fig. 77). As the cells have an up- ward inclination, honey leaves them much more easily than if placed in the opposite direction. Care should also be taken to put in combs of as near equal weight as possible; if a light and heavy one are put in together great strain will be put upon the machine and probably cause damage, apart from the revolu- tions being very irregu- lar. Now turn the handle (Fig. 78) but do not make the revolu- tions too quick at first, for as the combs are heavy they may break down. It is better to first extract a portion of the honey from both sides by slow turning, then repeat the process quickly enough to re- move the remainder. It will be necessary to screw the extractor to the floor or it will not be stable but move about. Thumb-screws are the best for this purpose. After extract- ing, the honey should be strained into a ripener; to make this more effective tie a piece of cheese strainer over the bottom of the straining receptacle, which is fitted with a piece of perforated tin, this will take out the large particles of foreign matter, while the cheese strainer (Fig. 79) will remove the smaller ones. It can then be run into 28lb. air-tight lever lid tins for storage until required. They are the handiest size, for, if the honey is sold in bulk, four go to the cwt., packing very neatly in a case, and if it is necessary to liquefy the honey they are more convenient to deal with than the larger sizes, or it can be run into jars right away (Fig. 80) for marketing.

FIG. 80.

(To be continued.)

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

A SURPLUS OF WINTER STORES.

[9131]—On 20th August last (about three weeks after removing supers) I found that most of my hives had the brood-combs choked with honey, there being in some cases not a square inch left for brood-rearing. This necessitated extracting, with the result that I secured a great deal of honey I had not counted on, all of it being of a very clear golden amber. Owing, however, to the alarms and excursions of those days, I had not time to attend to one of my hives at all.

On 15th March last I found robbing going on in this hive, and, on examination, I discovered that the stock had died out. There was less than a cupful of dead bees (with queen), and it was clear they had died of starvation after emptying the two combs they were actually on, not having had sufficient vitality to move on to any of the other six combs that were loaded with stores.

It would be interesting to know if many hives have succumbed to this somewhat unusual complaint! It shows, at any rate, what a splendid season last year was, as there is no heather here, and at the end of July there was plenty of room in the brood-combs.—H. CAMPBELL, Pulham St. Mary, Norfolk, 19th March, 1915.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of February was £3,567. From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	24	19	0
C. W. Dyer		2	6
	£25	1	6

PRESS CUTTING.

THE WISDOM OF THE BEE.

It is hard to say which is the more worthy of our admiration, the sagacity and industry of the bee or the painstaking and indefatigable labours of the scientists who have made them their life study. From the time of Aristotle down to the present day the bee has attracted notice, and men of an inquiring turn of mind have sought to investigate the intricate laws of the hive. It was not, however, until the observation hive was invented that they were successful in prying into the mysteries of the bees' city. Now, by long watching, naturalists have caused bees to yield up many of their dark secrets, and the outcome of their efforts has been to prove that the bee is a more wonderful creature than anyone could dare to imagine.

In one thing at least the bee surpasses the wisdom of modern man, and that is in its sense of direction. We think it extraordinary for a pigeon to find its way home many hundreds of miles from a place where it had never been taken before, but to think that a small insect will roam many miles from its hive and return to its home seems even more wonderful still. For it must be remembered that where there is a large apiary consisting of say fifty hives the bee singles out precisely the same hive from whence it set out. Should it by any possibility mistake another hive for its own it would not gain admittance, as every colony of bees has some undefinable sense—a sense man does not appear to possess—of knowing its own "citizens." To our eyes a bee from one hive and a bee from another, providing they are of the same species, would appear exactly alike, but the insects guarding the hive can tell at once if an incoming bee is a stranger. There is no intercommunication or intercourse between the bees of different hives, and a stray visitor would be as rigorously excluded as if it were quite a different kind of insect.—From the *North Wales Chronicle*.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

E. M. PENROSE (Guernsey).—*The Camellia as a Honey Plant.*—No doubt the Camellia yields honey, but we cannot say if in any quantity.

B. BRIERLY (Worcester).—*Infection of Queens by Nosema Apis.*—In the supplement to the Journal of the Board of Agriculture, No. 10, page 12, you will find that Nosema spores were found in the alimentary tracts of queens, but that infection of the egg has not been decisively proved. Your queen was dead on arrival.

H. THEOBALD (Norfolk).—*Sending Honey by Rail.*—The railway company will not convey honey at the agricultural produce rate, but will accept it at owner's risk rate; this is about half the ordinary rate.

A. J. ROBBINS (Hounslow).—You can do nothing more than follow the advice given to various correspondents in this column during the last few weeks. The disease has been in your district for some time.

"RADNORIAN" (Radnorshire).—(1, 2 and 3). You have a drone-breeding queen. She is probably one that has not mated. Yes, unite them to another stock. (4 and 5). There is no disease in the comb.

W. DAWKINS (Sutton Coldfield).—We are sorry to say that "Isle of Wight" disease is by no means exterminated. You had better wait a little longer.

J. WYMAN (Cambs.).—You can get what you require from Jas. Lee and Son, Uxbridge. Ask for a "bee vaccinator." It is advisable to consult a medical man before applying bee-stings to a person not accustomed to them.

Suspected Disease.

E. M. C. K. (Ascot), WM. TAIT (Hants.).—It is "Isle of Wight" disease.

H. P. YOUNG (Anstey).—We should say it is the ordinary cleansing flight. We have had numbers of cases of bees dying from "Isle of Wight" disease during the winter in exactly the conditions you describe. In the winter the bees are unable to leave the hive owing to the cold, and simply die *en masse* in the hive.

F. PERRY (Dunmow).—Your bees are suffering from "Isle of Wight" disease. There is at present no cure, so the best thing is to burn the affected stocks.

A. B. B. (Kent).—The bees were too dry for diagnosis. It is possible the stock was queenless.

J. WALWYN (Monmouth).—If you like to send a few bees to this office we will try and help you. Keep the hives and surroundings clean and free from dead bees and excrement. You might medicate any food with quinine, and keep some disinfectant in the hive.

G. B. C. (N. Walsham).—It is "Isle of Wight" disease. The dampness would favour the disease. The honey will be quite good for consumption if it is clean.

R. SMITH (Chelmsford).—(1.) It is "Isle of Wight" disease. (2) Dutch or Banat bees resist the disease better than others, but both are prone to excessive swarming, especially the Dutch. (3) It is immaterial. You may clear and remove one at a time, or do them all at one operation.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1*d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3*s. per* ¼*in., or* 5*s. per inch.*

PRIVATE ADVERTISEMENTS.

SIX strong healthy stocks bees for sale, in modern 10 frame hives; never had disease in apiary; lifts to tier, 2 or 3 racks each hive; £2 each.—MRS. HUNTER, Aston Magna, Moreton-in-Marsh. v 7

LADY, expert of B.B.K.A., is willing to undertake care of small apiary to leave owner free to serve his country; expenses only.—BEE, "B.B.J." Office, 23, Bedford-street, Strand. v 5

SALE, strong stock black bees, in D.W. hive, with 2 crates, 36s., guaranteed.—LAWRIE, Kinlord, Kirkintilloch. v 4

ON SALE, some very fine Scotch heather honey, in glass jars, about 8lb. each; gathered in Kirkcudbrightshire.—THOS. ROBINSON, Sunny-point, Crook, Kendal. v 6

LIMNANTHES DOUGLASII, splendid bee plant, strong, wants planting now, 100, 9d. free; proceeds for missionaries.—CHARLES DRAKE, Chatteris. v 2

WANTED, up to 2 cwt., pure heather honey. Sample and lowest price to J. YOUNGER, 29, Newmarket-road, Cambridge. v 8

FOR SALE, Devonshire honey (medium), 28 tins, 56s. per cwt., free on rail.—BRAUND, Bratton Clovelly, Lewdown, Devon. v 9

1 CWT. finest medium granulated honey, 60s.—H. ALLEN, 43, Cromwell-road, Rushden, Northants.

FOR SALE, new standard hive, fitted brood foundation, lifts, &c., spring crate, 50 sections.—MISS BLYTH, Thorley Bourne, Bishop's Stortford. v 11

WANTED, stock guaranteed healthy bees, Carniolans preferred; state price.—ASH-KETTLE, Whittington College, Highgate. v 12

WANTED, stocked skeps and early swarms.—M. H. TILLEY, Bee Farm, Dorchester. v 13

FOR SALE, seven stocks of bees, in bar frame hives, young queens, guaranteed healthy.—INGALL, Blyton, Gainsborough. v 14

TWO strong healthy stocks of bees for sale, cheap, 1 in W.B.C. hive, 1 in Taylor's non-swarming hive; also spares and appliances; all new 1913; particulars.—PUGH, Pentre Broughton, Wrexham. v 15

BEE FARM.—100 stocks, sheds, extractors, frames, weed foundation, colonies healthy, owner in France, going concern or for removal; offers wanted.—Write, RIDLER, Dunster, Somerset. v 89

FOR SALE, three strong stocks of bees, in good hives, certified healthy, 30s. each.—J. COLECLOUGH, No. 5, High-street, Hirwain, near Aberdare. v 90

UTILITY White Wyandottes, trapnested strain, eggs 3s. sitting.—BROWN, 20, Temple-street, Wolverhampton. v 99

FOR SALE, three hives bees, guaranteed healthy, extractor and appliances; particulars.—GILBERTSON, 43, High-street, Annan. v 1

FOR SALE, three complete hives (standard sizes), with healthy stocks, full sets waxed supers, queen excluders, bee excluders, feeders, £5.—EARP, Preston Brook, Warrington. v 79

49 LINCOLNSHIRE STOCKS for sale, in one lot preferred, with or without hives, young queens, owner enlisted.—SERGEANT-MAJOR, 6, Kingsley Villas, Surrey-road, Bournemouth. v 78

GIVING UP BEE-KEEPING; few stocks of Goldens, hives, and sundries for sale.—I. H. ANDERSON, 128, Castelnau, Barnes, S.W. v 80

LEMON Rocco and Red Bassano onion plants, single 100 8d., 300 7d. per 100, free.—THOMPSON, Apiary House, Gawdall, Snaith, Yorkshire. v 81

CRIMSON clove carnations, 2s. 6d. dozen; exchange bees, appliances, books.—MACE, Stow, Huntingdon. v 71

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

Editorial

OBITUARY NOTICE.

MAJOR FAIR.

We regret to announce the death on March 21st of Major Fair, who has resided at Anlaby Road, Teddington, for over thirty years. He came of a family which has for generations given its sons to the Army. Major Fair was a man of many interests. He was a keen apiarist, who took great delight in his bees, and was also interested in educational matters, natural history, and microscopy. He had a wealth of information on botanical subjects, and another of his hobbies was mechanics. Major Fair was the honorary secretary of the Middlesex Association for some years, until his age and the amount of work became too much for him, and he resigned the post, the work being undertaken by our Junior Editor. He was also at one time a member of the Council of the B.B.K.A. His illness was of very brief duration. On Saturday he complained of pains in the chest and arms. Medical aid was obtained on Sunday, but he quietly passed away in the evening at the age of 75 years.

THE B.B.K.A. CONVERSAZIONE, MARCH 18TH.

LECTURE BY MR. G. HAYES, BEESTON, ON "THE SEPARATION, EXAMINATION AND PHOTOGRAPHING OF POLLEN GRAINS FROM HONEY."

Mr. Chairman, Ladies and Gentlemen,—I am here to-night, as most of you know, at the Council's invitation. I was rather pleased when I received that invitation, for the reason that many people have expressed to me their desire to know something of the method of dealing with pollen grains. I do not know whether you will be too full of expectancy from the notice of Mr. Herrod-Hempsall in the BRITISH BEE JOURNAL, but I hope you will not be disappointed in what you will hear and see. There is one thing in my favour, that is, it is a somewhat new subject to you, and which will help me very much. What I hope is that what I do say may raise questions on points on which I may not touch. I want to try to be useful to all of you present. At the same time I am not unconscious that I have before me some scientists. Now I ask them that they will bear with me, because it is not to them, remember, I am talking, but it is rather to those amongst you who are seeking this information, which I will give to the best of my ability. I think no excuse will be needed for showing you amongst the slides, all of which I have prepared specially for this lecture, some home-made appliances, as they reduce the cost very considerably to those who go into the subject.

In dealing with this matter we shall have to go a little outside the realms of usual bee-keeping, but this is only the means to an end which has its termination therein. You know that pollen grains are too small to be studied by our eyes alone, so that we shall need some aid, and this aid is given by a microscope. I find that comparatively only a few are microscopists. Now the man with a microscope needs no picture palaces or theatres, or very few of them, at least I find it so. The microscope, when we have it, will reveal the beautiful and myriad forms of life, which without it we could never see, and the complicated structure of all those things which we can partially see. In fact, everything we have brings matter to the microscope—the ponds, the streams, the seas, the lakes, the soft earth, the granite mountains, beasts and all cattle, worms and fowl, all plants, and what is more important to us to-night, all flowers. In all these we shall be able to see life from its single cell to the highest of developed organisms. Forms, animal and vegetable, some, strange to say, consisting of both, some doing things opposite to what we usually expect of them—migratory vegetables, stationary animals—some of which are, indeed, very very small, measuring only $\frac{25}{1000}$ of an inch. In fact, there is no end to the wonders it will reveal, both to our eyes and to our minds. To bee-keepers it will make manifest the hidden secrets of the bee itself, its home and products. We shall find it useful in examining bacteria and other causes of disease, fungi growth in the honey and honey dew, a sample of which we have had shown us to-night, and foreign matter which may be accidental to it, by ascertaining it among the pollen grains, and from which we are, to a large extent, able to state the source or sources, owing to the fact that each genus of plant yields its own form and colour of pollen grains. I should like to say here, that taking any particular sample of honey, the source of which is to be ascertained, that the one who decides by flavour will not always agree with the microscopist; the reason for which is not far to seek. The flowers of some plants are highly aromatic—thyme, lime, and heather—and a small proportion of any one of these—lime for instance—will thus decide

the source, the flavour influencing them towards that particular flower. While the microscopist would in his examination find that the majority of pollen grains were probably from the white clover and red clover, mixed with just a few from the lime. The question may arise: "How then shall we decide as to what the honey is, lime or clover?" As regards its source we cannot get away from what the microscope reveals, but as to whether we shall call it lime or clover will depend upon the intensity of the lime. If the predominant flavour is that of lime honey we should take it as lime honey, but yet the microscopist would be right in saying its source is mainly from clover. The examinations in the majority of cases will depend wholly upon what pollen grains are revealed by the microscope. In addition to this it will reveal whether pollen grains are in sufficient quantity to raise the honey above suspicion of adulteration; and what is far more necessary, it enables us to know whether the pollen grains are English or foreign. Now to enable you to accomplish this is my pleasure to-night. I am afraid that perhaps some of you will be disappointed with what I am about to take. You have perhaps come with the hope that I will treat of flowers, or anything from a botanical point of view, but I am going to treat the subject from a technical point of view, namely, how we may examine these pollen grains, and so we come to the separation of pollen grains from honey.

(To be continued.)

PAINT INSIDE HIVES.

By D. M. Macdonald, Banff.

In a recent issue I expressed a mild dissent from an endorsement by somebody of a recommendation to use this material inside the bees' homes, and I have been asked why? I am always ready to give my reasons for the faith that is in me, because I try never to make an assertion without having first examined and estimated the value of the pros and cons. A painted floor-board or hive-sides produces a smooth shiny surface—what I may call an icy going for the bees—which very much militates against the bees' comfortable and expeditious movements. At times haste is an essential to success. Bees require to obtain a grip of the surface which they tread, and an over-smooth floor retards their going. Their tarsi and digiti are admirably suited for the ordinary floor surface, whereas so slippery a path as paint produces may in some cases become a serious impediment to free movement. If the bees could speak undoubtedly they would emphatically veto the use of paint! Again, white looks pleasant while it remains fresh, but, unfortunately, in course of time it becomes soiled, dingy, even almost black, and anything but a thing of beauty. Indeed, it quickly assumes so offensive a hue that it should not be tolerated in the hive interior, where everything should be sweet, fresh, and pleasant to the eye. Then it may be a source of evil in that it retains the moisture at times generated in the brood body. The inner walls may be seen covered all over with small globules of "sweat." The heat in the cluster on rising, or issuing at the side, when cooling condenses the cluster's hot breath and lodges it on the painted surface as is never observed on an unpainted board. The question asked on page 25, however, hinges on the point as to whether (or not) it may be a disinfectant? It may (perhaps), but again it may not! The traffic, the interior heat, the varying temperature, the condensation and evaporation of moisture have all a wearing tendency, with the result that in course of time the paint peels off, or scales off, or dusts off, according to the quality of the paint—and then the spore once more under favourable circumstances becomes a living thing. The disinfectant ceases to disinfect. Remember, the average bee-keeper is not a painter. He accepts and uses a concoction dignified by the name of paint. Spores, to my knowledge, have thus been resuscitated after a considerable period of burial under a coat of paint, hence my estimate of its power to kill and cure is a low one, and therefore I cautioned implicit trusting to its use.

Spring Pollen.—Thrice is he blessed who has a large tract of damp soil near his apiary growing large numbers of willows bearing rich bloom in early spring. No other flower or plant at this season is worth naming in the same breath with the various families of salix. How the bees revel on the catkins; what a delightful and contented throng crowds around them; what a stream of bees steadily march to and from the hives during every shining hour. Then a large bed of crocus flowers is a veritable pollen mine to the bees on a bright spring day. They industriously try every open snowdrop, with only medium results. Coltsfoot, wherever found, is the very centre of a whole-hearted

song of jubilation. Damson, pear, plum, peach, and apple trees, and gooseberry, currant, and other fruit bushes, are a very paradise of praise. Turnips and the various brassicas, where left to seed, are centres of sweet content to thousands of *apis mellifica*. Nor should we forget the homely meal and dusty flour in which the bee loves to roll, and where she can load up so quickly the welcome supplies, piling it deep on her hairy thighs to transport to the hive's interior as welcome bee-bread, so necessary at this period for the increase of the family circle.

Spring Observations.—Unless where disease prevails, very few deaths have been reported this spring, and, as a rule, fewer weaklings have been found. In quite a number of cases, however, more dead bees than usual are discovered on the floor-boards. This should not cause anxiety, as it may be brought about by the simple fact in heather districts that many bees became prematurely old owing to the indefatigable labours they maintained during the closing weeks of the honey flow in September. In many districts, too, very few cleansing flights were possible for about ten or more weeks during the period December up to mid-February. Consequently, bees which in the ordinary course would crawl out to die or be thrown out by the workers still lie inside. For the same reason, if a considerable amount of *débris* or comb-capping is observed about the flight-board or hive front on mild days, it need not cause any uneasiness. Bees are simply shifting the cluster or expanding the area hitherto covered. The breeding going on necessitates uncapping of honey and the shifting of stores to the close proximity of the brood nest. It is rather an indication of strength than any sign of weakness, as is sometimes supposed. Outside observation only should be indulged in as yet unless in the south, where apiarian matters may be a full month ahead of what it is with northern practisers of the craft.

DERWENT NOTES.

A YEAR'S RECORD.

Successful Wintering, 1913-14.—My report may be somewhat belated, but I am acting on the maxim "better late than never." For the third year in succession all my stocks came through the winter in good order. This success has supplied incontrovertible evidence about two important points:

1. *The Superiority of Young Queens.*—I commenced the winter with five 1912 queens and five 1913 queens, and without exception the stocks headed by young queens came out the strongest.

2. *The Suitability of Heather Honey as a Winter Food.*—I had the honour a few years ago of initiating a correspondence in these columns on this subject, and the experience of many writers has been overwhelmingly in favour of this winter food. My winter food always consists almost exclusively of heather honey. The fact that all my stocks for three seasons have withstood the changeable character of English winters is one more proof that as a winter food heather honey is not only suitable but easily holds the first place.

The Folly of "Hand to Mouth" Feeding.—Last spring I fed my bees very sparingly, with the object of not filling up space with syrup that should be occupied by brood. Subsequent events proved that I had been practising false economy. On opening hives in early June I found the bees were refusing to draw out foundation, and that there was a manifest slackening of brood production. The disastrous result of this policy was shown in the poor returns of the clover harvest, as I only secured in all about 80 sections. The lesson of this is, "never for one moment allow our bees to realise that they are on the verge of starvation."

A Record Heather Harvest.—I note in some districts bees were not gathering from the heather until the middle of August. In this district I saw some heather in bloom on 15th July, and by mid-August I was in possession of a large number of well-sealed sections. By the end of the season the grand result was 450 sections from ten stocks. This result is all the better when it is remembered that only six stocks were in "fit" condition. Two were 50 per cent below condition, and one 25 per cent., whilst another produced no surplus owing to loss of queen at dawn of the heather harvest.

Should Heather Honey be Sold or Given Away?—When it is offered to the public as it has been during recent months at from 9d. to 1s. per section, what can we say about it but it is given away, betraying on the part of the vendors a great lack of the much-needed qualities of resourcefulness, push, and perseverance. Owing to the war honey has certainly been a dragging sale. I have had quite four refusals to one acceptance. In spite of this, I have managed to dispose of all except 36 sections at the following remunerative prices: 150 sections at 1s. 6d., 214 at 1s. 4d., and 50 at 1s. 3d. each. It is true I have the advantage of a goodly business connection. On the other hand, I labour under the great disadvantage of living in a scattered rural district, fifteen to thirty miles from the centres of population, and without railway communication. May 1915 be a worthy successor to 1913 and 1914.—W. Pears, Hunstanworth, N.W. Durham.

CHESHIRE B.K.A.

ANNUAL MEETING.

The Annual Meeting of this Association was held at Chester on Saturday, March 20th, when the Rev. Canon T. J. Evans, M.A., presided over a good gathering of members. Messrs. A. Tobler, S. Fielder, and A. H. Atherton joined the Committee, and Capt. Garrett and Mr. Grant-Bailey were elected to represent the Association on the Council of the B.B.K.A. The hon. secretary in his report stated that "Isle of Wight" disease appeared to be on the increase, and there is now scarcely any part of the county untouched by this scourge. It was decided by the committee to utilise local experts for the spring tour. This will enable members to arrange for the expert to examine their bees when they, the members, will be at home. It was with great regret we heard that Mr. H. C. Barlow was unavailable again this year. By careful economies our balance-sheet shows a credit balance of £8 6s. 6d. for the year. We hope bee-keepers will do all they can to support the Association during the coming season, for there never was a time when it was so important to develop the resources of the country, and there must be many hundreds of acres of white clover in Cheshire never visited by a single bee, and consequently a vast amount of honey lost to the nation. The weather during the month has been good on the whole, so that bees have been able to make many visits to the crocuses. It really looks as if our expert, Mr. Astbury, and myself have got hold of a race of bees immune to the "Isle of Wight" disease, for after experimenting with them since October, 1913, in a district where native bees all succumb, these remain healthy and prosper; this in spite of frequent robbing out of diseased stocks. Last year we made two stocks out of the original one, and secured 60 lbs. of surplus honey; we would have had more surplus but for the fact that the first new queen hatched had an imperfect pair of wings, so was unable to mate. This necessitated the rearing of another queen in the height of the season. If any bee-keeper in Cheshire would like one of our booklets "On the Keeping of Bees," they can secure a copy gratis by applying to me.—E. W. FRANKLIN, Hon. Sec., Mouldsworth, near Chester.

CRAYFORD AND DISTRICT B.K.A.

ANNUAL MEETING.

The Annual Meeting of the Crayford and District Bee-keepers' Association was held at Crayford on Monday evening, the 22nd inst. Mr. E. R. Stoneham, the Vice-President, of Orchard House, took the chair. He explained that the Secretary, Mr. J. M. Bates, had experienced a serious breakdown in his health last autumn, and as he had not yet completely recovered, he (Mr. Stoneham) presented the accounts and the report for the year, which were received and adopted.

In reviewing the work of the Association during the past year, the outbreak of war had necessarily curtailed the summer programme, but three very successful meetings were held; one at Gravesend in March; at The Dene, Dartford, on May 23rd; and at the Experimental Apiary, Zoological Gardens, on July 11th.

The Development Grant under the Board of Agriculture had been discontinued, consequently the funds of the Association had suffered. However, after meeting all liabilities, there was a balance in hand of £1 0s. 4d., which, in the circumstances, was considered satisfactory. The appointment of President for the ensuing year was referred to the Council.

The Vice-Presidents were elected *en bloc*, with the addition of Mr. G. W. Judge.

Messrs. W. Ashdown, G. H. Barnes, F. C. Firmin, N. Hatt, W. Heaseldon, E. W. Hewitt, J. E. Smiles, F. Sykes, H. J. Upton, C. H. Rivers, and W. H. Prior were unanimously re-elected Members of Council for 1915. Mr. G. Bryden and Mr. G. W. Judge were appointed delegates to the Council of the British Bee-keepers' Association. Mr. J. M. Bates was re-elected Secretary, with Mr. G. W. Judge as Assistant. This arrangement, it was thought, would relieve Mr. Bates of much of the work and worry of the Association at a time when he particularly needed rest.

Mr. Judge, speaking for the Committee of Experts, stated that owing to the war it had not been possible to collect complete figures to enable a report to be submitted this year. A quantity of data had been obtained concerning members' apiaries, but as it was incomplete, it would not indicate the true position. He was glad to say that so far as the area covered by the Association was concerned, "Isle of Wight" disease was not nearly so virulent, and although numerous cases had been reported, there was a decided improvement over the state of affairs existing twelve months ago. He believed that the epidemic had more or less spent itself, and that it would be advisable to commence restocking. On the suggestion of Mr. Rivers, it was decided to collect information from various parts of the county, in order to ascertain as accurately as possible the present conditions. The matter was left in the hands of Mr. Judge, who promised to submit a report on the subject in the near future.

The question of the co-operative scheme for the provision of complete stocks of bees, from a central breeding establishment (the details of this scheme were reported in full in the BEE-KEEPERS' RECORD for August, 1914) was discussed with much interest.

Mr. Barnes explained that it would not be possible to put the scheme fully into operation this year, owing to the fact that those concerned in its working would not be able to give the necessary time to it, due to present war conditions. He had received a number of enquiries showing the interest which had been taken in the movement.

Mr. Judge said he did not think it possible to carry out the scheme in full this year, but proposed to establish an apiary shortly which would be used to form the foundation colonies, so that a commencement could be made on a larger scale in the spring of 1916, with more likelihood of success. In the circumstances it was decided not to issue the shares this year, but in order that a commencement could be made, a foundation, or guarantee fund, will be opened shortly to provide funds for the committee to establish the apiary. Next year, when the shares are issued, the amounts subscribed to the foundation fund will be refunded; in this way it is hoped that the machinery for carrying out the scheme will be put into operation during the coming summer, and at the same time place the scheme on a proper financial basis.—(*Communicated.*)

QUERIES AND REPLIES.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

[9000] *Particulars of Microscope.*—I was very interested in the microscope which your esteemed co-Editor has, and which was eulogised in "B.B.J." for the 25th ult., but as I cannot afford it all at once I thought of buying a 1in. one to start with, but would like the stand to be of a pattern that would take the necessary condensers, eyepieces, and 1-12th lenses, for 1,000 magnifications. Would it be too much for me to humbly ask you to make a rough specification how to order same, as I know absolutely nothing about them? I have bought several books, but not one of them gives details of the various accessories required and their method of using. Do you know of a book that gives full details, as, for instance, what eyepiece to use to suit various objectives?—Thanking you in anticipation. Yours faithfully, G. H. JONES.

REPLY.—You do not say what price you are prepared to give for an instrument, but you can get a student's microscope from £5 upwards, depending on the class of instrument and the accessories. You should send for price lists to C. Baker, 244, High Holborn, or W. Watson and Sons, 313, High Holborn, London, in either of which you may find what would suit your purpose. Higher priced instruments can be obtained from Messrs. R. and J. Beck, 68, Cornhill, London. Such an instrument as that to which you allude, which is a binocular one, would cost with accessories £130. The 1-12th oil immersion objective made by Powell and Lealand alone costing £23. There are, however, very good oil immersion objectives now made at very much less cost. All British microscopes are made with a standard screw, so that any maker's objective can be used, adapters being fitted to those of foreign make. If you will say what price you are prepared to give, and the special object you require the microscope for, we would be pleased to give further advice. Most of the standard books on the microscope give the particulars you ask for, one of the best being "The Microscope and its Revelations," by Dr. W. B. Carpenter, revised by Dr. Dallinger, price 24s. Another book, now out of print, which may possibly be obtained secondhand, is "How to Work with the Microscope," by Dr. L. S. Beale. "Practical Microscopy," by G. E. Davis, is published at 7s. 6d., but could probably be obtained secondhand for about half the price.

Notices to Correspondents

A NOVICE (Aberdeen).—*Dead Queen.*—The queen is a virgin, and has probably been balled. Under the circumstances it is quite likely there is a laying queen in the hive. Our bees have been re-

turning to their home, laden with pollen, in less than half an hour, when liberated after a journey of 20 to 50 or more miles.

"WHITESBONE" (Devon).—*Quinine for Bees.*—(1 and 3) Yes, you can get it at any chemist's. Ask for sulphate of quinine. (2) Dissolve 60grs. in ½oz. of water acidulated with 2 drops of sulphuric acid, and add to each gallon of syrup, or to each 5lbs. of sugar when making candy.

H. TYSON (Eccles).—Yes, it is intended to publish "Helpful Hints" in book form when the articles are complete.

K. C. THATCHER (Stourbridge).—The secretary of the Worcestershire B.K.A. is Mr. J. P. Phillips, Spetchley, Worcester.

A. M. M. (Lincs.).—(1) Yes, they are all right. (2) There is more risk of the disease re-appearing if you start again at once, but if you care to take that risk you may start again this year. Take all precautions as advised in this column from time to time. (3) Any time now. (4) Dutch or Banat bees do not take the disease so quickly, but they are prone to excessive swarming. (5) Yes, if a dry situation that would be better than the old location. Do not put them too much in the shade.

Suspected Disease.

C. H. NOEL (Salisbury), MANN (Essex.)—It is "Isle of Wight" disease.

J. T. DICKINS (Northampton).—The bees are too dry for diagnosis. Sorry we cannot add anything to our previous communication.

J. V. T. (Llansadwrn).—(1) Native. (2) We do not detect any. (3) Appears to be old age, but cannot say definitely without further particulars.

VICE-ADMIRAL (Swindon).—We cannot say, but do not find any disease in those sent. Sorry we cannot make out your name, but hope this will meet your notice.

G. H. C. C. TATE (Chesterfield).—We do not detect any disease in either of the samples of bees.

MARGARET (Pwllheli).—There does not appear to be anything wrong with the bees sent. If there are any "crawlers" through "Isle of Wight" disease you will see more than one, there will be dozens, or perhaps hundreds. If you notice a large number send us a few of them.

G. H. HOWES (Piddington).—The bees were too dry for diagnosis, but the symptoms point to "Isle of Wight" disease. There is always a risk of the disease re-appearing. If you do start again procure the bees locally if possible. In future, please have a little consideration for us, and do not place a letter on the top of a piece of comb containing honey.

V. R. B. (Birmingham).—There was no disease in the bees sent.

C. CROOK (Liverpool).—The bees were too dry for diagnosis, but from the symptoms you describe it is a case of "Isle of Wight" disease.

G. G. MILNE (Norfolk).—It is "Isle of Wight" disease again. The brood would be chilled; owing to the bees dying off rapidly they would become too few in numbers to keep it warm. You forgot to enclose the stamp.

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	25	1	6
Yorkshire Tyke	1	1	0
	£26	2	6

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS.

TEN HIVES, "Cottager" pattern, telescopic covers, 10s. each with nine brood and shallow frames, and rack; extractor, 12s. 6d.; ripener, large size, 9s.; six Canadian feeders, 2s. 6d. each; six bottle feeders, 1s. each; all good as new.—"BEES," 23, Bedford-street, Strand, W.C.

SWEET CLOVER (Melilotus Alba), the finest honey plant in the world; seed (unhulled), 3d. per ounce.—BLACKBOURN, Minster, Thanet. v 16

TWELVE SECTION RACKS, cover ten frames, 1s. 3d. each.—FRASER, Melton Cottage, Markinch. v 17

WANTED, one stock Goldens, strong, healthy.—O. W. ROWLANDS, Barnt Green, Worcestershire. v 18

CANARIES (Yorkshires), one cock, two hens, long, clear birds, set for breeding, value £1 10s.; exchange for bees.—D. BOWLER, Mansfield Woodhouse, Notts. v 19

EXPERT would undertake spring tour; experienced; references.—EXPERT, "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 20

FOR SALE, few dozen first grade sections.—NELSON, Paradise Cottage, Appleby. v 21

SIX healthy stocks of bees for sale; what offers?—MR. C. JERRISON, Moscar, Millhouses, Sheffield. v 22

ON SALE, some very fine Scotch heather honey, in glass jars, about 8lb. each; gathered in Kirkcudbrightshire.—THOS. ROBINSON, Sunnypoint, Crook, Kendal. v 6

LECTURE BY MR. G. HAYES.

Owing to the Easter holiday the next instalment of Mr. Hayes' lecture at the Conversazione is unavoidably postponed until our next issue.

BERKSHIRE B.K.A.

ANNUAL MEETING.

The Annual Meeting of the Berkshire Bee-keepers' Association was held at the Abbey Hall, Reading (lent by Messrs. Sutton and Sons), on Saturday. Ald. F. B. Parfitt (the chairman) presided, and there was a better attendance of members than usual.

The Committee, in their annual report, regretted to chronicle a further extension of "Isle of Wight" disease. The major portions of the northern and eastern divisions of the county, which at one time supported a large number of colonies, were now almost denuded of bees. Further accounts of losses during the past winter had come to hand as the report was being prepared. As a natural consequence of this condition of affairs the financial statement showed a considerable drop in subscriptions, occasioned by the withdrawal of many members who have lost all their stock. A few members had replenished their apiaries, and whilst in some cases the returns in produce seemed to justify this course, it had yet to be recorded that in most cases the experiment had not met with permanent success, a recurrence of the trouble having once again swept the bees out of existence; and it seemed fairly well established that there was slight prospect of a successful issue of any venture of this sort so long as any new imported stock was taken into a district in which there remained any bees that had suffered from the malady or which had been in contact with or within flight range of any affected stock. On the other hand, it also seemed fairly well established that where a district had been completely devastated re-stocking might take place with a fair prospect of success. In the opinion of the Committee it was highly desirable that careful steps should be taken by any bee-keeper desirous of re-starting to make quite sure that the district was absolutely free before introducing any fresh stock, and also be quite sure that any new stock was obtained from an uncontaminated neighbourhood.

An application for funds for instruction in bee-keeping was made to the Agricultural Committee in 1914, and a sum not to exceed £30 was granted, but, owing to new arrangements the matter was not settled till somewhat late in the season, and, in consequence of so few colonies remaining in existence, little visiting took place. The experts visited 67 bee-keepers, having 122 colonies of bees, of which 101 were in frame hives. The total membership was now 55.

The Chairman, in moving the adoption of the report, said that the terrible "Isle of Wight" disease had continued its ravages in the county, and its effects were reflected by the Association's financial position. He urged all bee-keepers who had been sufferers not to be too despondent, but to look forward to better times. Possibly later on they would have legislation dealing with the matter, though they could not expect anything to be done while the Government was engaged in the present great struggle on the Continent. If the disease continued its destructive course and no remedy for it were found they would be perfectly justified in pressing upon the attention of the Government of the day the absolute necessity, in the interests of the industry, of suitable legislation being passed. There seemed a prospect not in the remote past of a Bill being obtained, but they knew that under the rules of procedure in the House of Commons a few cantankerous members could, especially towards the end of a session, stop the passage of a very desirable measure. Something of that kind happened with regard to the Bill introduced into Parliament between one and two years ago, and it had to be dropped at the last moment. Unless something were done bee-keeping as a profitable industry seemed almost doomed. When the proper time came the Committee of the Association, in conjunction with the Agricultural Committee of the county, might institute re-stocking experiments in selected districts, using bees, perhaps, from another country.

After a brief discussion the report was adopted, together with the balance-sheet, which showed receipts amounting to £69 15s. 5d., including reserve fund (Jan. 1, 1914) £26 9s. 6d., balance at the bank and cash in hand £15 11s. 9d., subscriptions £13 11s. 6d., and grant from the Berks Agricultural Committee £13 16s. After paying expenses, and transferring £2 13s. 2d. to the reserve fund, there was a balance in hand of £11 0s. 10d.

The officers were elected as follows:—President, Her Royal Highness the Princess Christian of Schleswig-Holstein; Vice-Presidents, The Lady Wantage, The Hon. Osbert W. Craven, J.P., C.C., T. E. Ellison, Esq., Major Henderson, M.P.,

W. A. Mount, Esq., M.P., Sir H. Vansittart Neale, K.C.B., Alfred Palmer, Esq., J.P., and G. W. Tyser, Esq., J.P.; Committee, Chairman, Mr. F. B. Parfit, J.P., Vice-Chairman, Mr. E. J. Bromley, Mr. A. Sandys, Miss L. E. Anderson, Messrs. H. Edwards, T. A. Flood, A. Gibbs, C. H. Heap, A. D. Woodley, E. Blatch, A. Whitbread, C. J. Stimson, C. O. Walter, and E. Hopgood; Hon. Auditor, Mr. W. E. Collier; British B.K.A. County Representatives, Messrs. A. D. Woodley and E. J. Bromley; Hon. Secretary, Mr. D. W. Bishop Ackerman.

Before the meeting the members were generously entertained at tea by the Chairman.

NORFOLK B.K.A.

ANNUAL MEETING.

The annual meeting of the Norfolk Beekeepers' Association was held at the Council School, Holt, on Saturday. Mr. H. Bond presided. Mr. H. D. A. Deterding, of Kelling Hall, was elected chairman of the association. The appointment of Mr. J. A. Bramley (Holt) as hon. secretary and treasurer in place of the late Dr. Wardleworth, was confirmed. The committee were appointed, five additional names being added to the list. The question of attending shows during the present year was left in the hands of the secretary to arrange. Mr. Bramley explained that he was trying to arrange local centres at which candidates could be examined and take up certificates as experts, and it was suggested that meetings be arranged for this purpose at Sheringham, North Walsham, Norwich, King's Lynn, Fakenham, and Wymondham. The association now embraces the whole of the county, and the secretary announced that he would be pleased to receive offers of help from any person interested in the work of bee-keeping. Efforts will be made, he said, to form districts to be worked by local secretaries, and it was to be hoped that the present year might witness a large influx of new members and supporters.

SUSSEX B.K.A.

ANNUAL MEETING.

The seventh annual meeting of the Sussex Bee-keepers' Association was held at the Town Hall, Brighton, on Wednesday, March 24th, 1915, the Mayor of Brighton, Alderman J. L. Otter, J.P., presiding.

The Chairman, in his opening remarks, said that he was glad to be able to accommodate the Society with a room in the Town Hall, as the Pavilion, where the meetings had been held previously, was now occupied by Indian wounded.

He was pleased to see from the report that the "Isle of Wight" disease was on the decrease, and hoped that some effectual remedy would soon be found that would entirely stamp out the disease. After remarking that it gave him great pleasure to preside, and wishing the Association every success, he said that at times such as this it was desirable that this and all similar societies should be kept going, as they did a great deal of good work at a small cost.

The Rev. A. C. Atkins, in proposing the adoption of the report and balance-sheet, said that the Society was passing through a critical period, as several members have resigned owing to loss of bees, removal, &c., but he thought that the report was very satisfactory, there being a balance of cash in hand of £1 11s. 7d.

Mr. W. T. Cowell seconded, and said that under the adverse conditions the balance-sheet was quite satisfactory, and on being put to the meeting the report was adopted.

On the proposition of Miss Thomas, seconded by Miss Allison, a vote of thanks was accorded to the retiring committee and officers.

Mr. B. J. Burtenshaw proposed the re-election of the President (the Marquess of Abergavenny, K.G.), the Vice-Presidents, Earl Winterton, M.P., Sir Thos. Barrett-Lennard, Bart., Mrs. Sharman, Sir Stuart Samuel, Bart., M.P., W. A. Sturdy, Esq., and the Rev. D. L. Secretan; the Hon. Auditor, W. Hill Hunter, Esq., A.C.A.; the Hon. Secretary, Mr. C. A. Overton; and the Expert, Mr. C. T. Overton, which was agreed to.

On the proposition of Mr. C. A. Overton, seconded by Mr. C. T. Overton, the following Committee were re-elected: Rev. A. C. Atkins, Messrs. B. J. Burtenshaw, W. T. Cowell, Tickner Edwardes, Mrs. Morris, and Miss Savage.

On the proposition of the Rev. A. C. Atkins, the following resolution was passed: "That this Annual Meeting of the Sussex Bee-keepers' Association place on record the hope that the Board of Agriculture and Parliament will take the earliest opportunity of passing a Bill to regulate the bee industry."

A hearty vote of thanks was accorded the Mayor for kindly presiding.

LEICESTERSHIRE AND RUTLAND B.K.A.

ANNUAL MEETING.

The thirty-third annual meeting of the Leicestershire and Rutland Bee-keepers'

Association was held at the Higheross Coffee House, on Saturday, March 27th. Mr. W. K. Bedingfield presided, and there was a large attendance.

Mr. John Waterfield's annual report, as Secretary, stated that the membership of the Association was 323, against 322 in 1913. The past season had been fairly good for honey, both as regards quality and quantity, some districts doing remarkably well.

The financial statement showed that the receipts during the year amounted to £83 2s. 8d. and the expenditure £71 0s. 3d., leaving a balance in hand of £12 2s. 5d., against £10 4s. 10d. last year.

On Mr. A. E. Biggs' motion, Mr. H. M. Riley seconding, the report and balance-sheet were adopted.

The following officers were elected: President, Lady Levy; the Vice-Presidents and Executive Council were re-elected with the exception of Mr. C. Halford, of Woodhouse, who has resigned, his place being filled by Mr. C. H. Parsons, The Priory, Ashby-de-la-Zouch; Chairman, Mr. E. J. Underwood; Vice-Chairman, Mr. A. E. Biggs; Hon. Treasurer, Mr. H. M. Riley; Hon. Auditor, Mr. W. K. Bedingfield; Hon. Secretary, Mr. John Waterfield; Representatives to meetings of B.B.K.A., in London, Messrs. Faulkner and Biggs. At the evening meeting the usual prize-drawing took place. Mr. Geo. Hayes, of Beeston, then gave a very instructive lecture, illustrated by lantern slides, on the "Isle of Wight" disease, which was greatly appreciated.

EXTRACTS AND COMMENTS.

By D. M. Macdonald.

Absorbents.—Messrs. Root have always argued strongly in favour of sealed covers against absorbents. The secret of this preference comes out in one of the recent issues of *Gleanings*. Two points tell in favour of the system of packing so generally practised in this country, as the following extracts show:—"Strictly speaking, we did not use *sealed covers*, but a compromise which has given us the best results." Here is the second important point. "Mr. Holterman called our attention to the fact that we did not provide an air space above over the top of the absorbing material, which he regarded as *important*." This I have pointed out previously. Many of the "sealed covers," so-called, used in this country afford a certain amount of upward ventilation, and hence their success.

Observations.—In reporting on the matter of wintering observations the ordinary bee-keeper is either careless in his method of reporting what he sees or does not actually see what he thinks he sees. Too many times the average man jumps at conclusions based on a single observed incident. Dr. Phillips and his assistants are drawing conclusions from scores and scores—one may say thousands—of observations." It may be of general interest to draw attention at some later time to the fruits of these observations. They may supply many valuable hints on safe wintering.

Dark v. *Light Bees.*—Comment of any kind would be superfluous on the following short extract. "Mr. Pritchard called attention to the fact that the *yellow* bees were not holding their own as well as the darker strains of Italians. The fact became more and more apparent as we examined the bees. The native Virginian *brown* bees showed up better yet." So says Mr. Ernest Root out of his wide experience.

Opinions Differ.—"The eight-frame is not worthy of mention as a bee hive. It may do for a home for a nucleus." *Gl.* page 36. "Don't be too hard on us eight-framers, friend. I get crops that don't exactly look like the work of nuclei from them." Page 95. Personally, my best results on several occasions were from nine-frame brood bodies, about an equivalent of the eight-frame Langstroth. Nay, I have at times had them beat double-body hives in the way of surplus takes of comb honey.

Enthusiasm.—The words following are Dr. Miller's: "Some talk of the enthusiasm of the beginner, and the better results because of that enthusiasm. All fudge—at least, in my case. Last summer (my 54th with them) I was just as much interested in working with the bees, and withal as grateful for the enjoyment of it all, as I was in the middle of the last century."

"*Long-idea*" *Hives.*—We call them combination hives. They are the same, and yet not quite all the same apparently. "Mr. Poppelton is a strong advocate of these, and claims for them a big advantage over those which tier up. Instead of giving eight or ten frames all in a bunch he adds one, two, or three as the colony can stand. His expansion of the brood nest is gradual, while the expansion on the vertical system is steady by jumps." Several of our veterans (among them, I think, Mr. Woodley) still

cling to these hives, and illustrations of them appear in dealers' catalogues. As a rule, I have found them used much as a nine or ten W.B.C. hive with the space behind the dummy used as a tool box, or for various odds and ends. Tiering up is carried on in the ordinary way with the result that the "combination" the name indicates is not secured.

Of Prime Importance.—A writer in Australian *B.K.* strongly endorses the following:—"You may talk and write about the importance of a good location, also of the knowledge and experience of the man in charge, each being very essential; but to have a good queen of a good honey-gathering strain in every colony is of more importance than any other one connected with the business." The latter clause appears in heavy type, deservedly. The queen is the prime essential on whom a full measure of success mainly depends.

Starting Bee-keeping.—Mr. Holterman gives a lot of good advice along this line. Get (he says) a good practical knowledge of the business as a whole. Digest more than one text book. Make sure your location is a good one. Buy carefully. Don't select the heaviest hive, and don't trust to a fresh, nicely painted outside. Standard hives and materials are best, but even odd sized frames with a wealth of bees are preferable to Langstroth size poor in bees. Examine for healthy brood and much of it. Select the one in spring with most bees flying per minute. See that the combs are movable and regularly built, with little drone comb. A colony even a little poorer in brood is better if all is worker cells. He favours Italians, but would prefer a colony of black bees if otherwise superior. Honey in the hives would take a minor position. A colony with clogged combs is undesirable, whereas one with scant stores can be easily fed with a little sugar syrup. If the beginner can buy from a reliable person he would put the onus on the seller. All these hints have been recorded before, but every spring scores of new entrants join our ranks. Spring is the best time to start, and the best time to buy bees.

Procuring Surplus.

(*Continued from p.* 98.)

As soon as the extracting is completed the cappings should receive attention. If allowed to stand exposed for several days the honey will absorb moisture from the air, become very thin, and eventually ferment. A fair amount of honey will

Fig. 81.

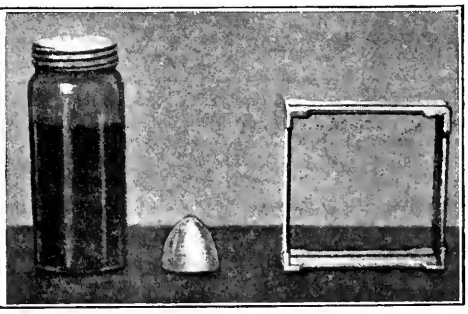


Fig. 82.

have drained away from them through the perforated tin while the uncapping is in progress. This should be poured into the strainer. The partially drained cappings should then be tied into cheese strainer and hung in a warm room, or, better still, in front of a fire. In the course of a night they will be drained and should then

be washed in several changes of warm rainwater to free them from stickiness. Spread in a thin layer on newspaper they become dry flakes (Fig. 81) ready for melting into cakes for sale. The wet combs are then dealt with for the purpose indicated, a few being saved as baits for next season. These should be stored, like the sections, in a warm, dry, dark and dustproof receptacle.

The combs to be cleaned should be placed on the stocks to be fed, in supers over an escape board in which the tin slide, covering the hole at the side has been removed, this allows the bees to pass up and down freely for the conveyance of the honey to the brood-combs for storage. When clean and dry the slide is pushed home and the combs are cleared from bees by the escape, taken off, and another batch put in their place. Should no feeding be necessary then the combs may be cleared

FIG. 83.

FIG. 84.

in the open; this is dangerous, and should not be attempted until a good deal of experience in bee-keeping has been obtained, or many colonies may be annihilated by robbing. Open air cleaning should be accomplished in one day. Put out the wet combs about 4 p.m. as far away from the apiary or living creatures as possible, so that the bees will have just time to clean them before sunset, then take them indoors, and the next morning all will be normal again in the apiary. The combs should be stored at once by packing the supers on the top of each other, on the top of each third one put a foot square of newspaper with half-a-dozen balls of Naphthaline to ward off wax-moth.

Unfinished sections should be extracted; each cage of the extractor will hold six, and the bottoms should lead as with shallow combs, they are then cleaned by the bees and stored as above.

Bee-keepers often speculate as to the amount of honey there is in a comb. (Fig. 82) shows an average section with the honey, wax, and wood separated, they weighed as follows: Honey, 14ozs.; wax, ½oz.; wood, 1oz.

Three shallow-frames, spaced just wide enough apart to enable the bees to build the combs beyond the wood of the frame weighed when evenly filled, 4lbs. 3½ozs., 3lbs. 11½ozs., 4lbs. 1¾ozs., or an average weight of about 4lbs. per comb. The wax weighed 2½ozs., 2½ozs., 2¾ozs.; therefore, we may assume that a ten-framed super will yield 40lbs. of honey and about 1½lbs. wax. These were clean combs kept for extracting.

At the same time the weight of honey in a ten shallow-frame super was tested, and the result was a net weight of 43lbs. 4½ozs. honey.

All the foregoing applies to up-to-date bee-keeping; there are still a few benighted people who insist on keeping (?), or, rather, *possessing* bees in skeps, as (Fig. 83). The difference between the two methods is well illustrated by a remark made by one bee-keeper to another a little while ago as follows:—"Mr. —— keeps over a thousand stocks, mostly in skeps, and last year, 1914, got a big take of *two tons* of honey."

This works out at a little more than four pounds of honey per stock, even though some were in frame hives.

The same number of stocks properly managed in frame hives, at the usual average of seventy pounds each, would have produced *thirty-one tons five hundredweight. Verb. sap.*

Others are not satisfied with the honey obtained only from the brood-combs, but go half way towards rational methods by either putting an eke under in the Spring to enlarge the capacity of the hive or adopt some form of super, if only the rudimentary straw cap (Fig. 84), into which the bees are allowed to pass through a small aperture in the top of the skep; the queen rarely ascends through this small hole, and so a small quantity of really saleable honey is obtained, or, as it was termed two decades ago, "virgin honey," on account of the clean and white combs.

(*To be continued.*)

NECTAR-PRODUCING PLANTS AND THEIR POLLEN.

By G. Hayes, Beeston, Notts.

DISEASED POLLEN.

Diseased pollen is recognised by its dull brown colour, opacity, and amorphous condition. It is taken up with other grains, and must be detrimental to bees, if only from the fact that it lacks that which in health it supplies them with, and so is likely either to clog the intestines or set up dysentery.

The disease of pollen is, I think, mostly brought about by frost or continuous rain, and in this state may no doubt be a carrier of organisms pathogenetic in the bee. These would probably be of the fungoid species, but I think it is reasonable to believe that there may also be other types which would find lodgment and thrive in the intestines of the bee, more especially after their arrival in the more genial atmosphere of the hive.

A NOVEL WAY OF COLLECTING POLLEN GRAINS.

At the Conversazione in London in October, 1914, there were present two gentlemen from Yorkshire, each of whom brought a bottle filled with a grey powdery substance, which I at once recognised as heather pollen grains. I had never seen so large a quantity together before, and was told that a bee-keeper who had bees on the moors, wishing to collect some of the pollen from the heather, had borrowed a pneumatic carpet cleaner. This he took out with him and applied it to the flowering heather, with the result that he soon had a large quantity to supply his needs and those of his friends.

COLOUR OF POLLEN.

The question respecting the colour of pollen from each genus of plants has often been perplexing, and I am afraid it will remain so until we decide on standard tints and use scientific means to reach a conclusion, but as this is both tedious and costly and of no material benefit, I suppose we shall still have to continue guessing the colour with as great precision as is possible, and people will have to accept the colour as stated. They must, however, remember that there are many factors to be considered, some of which are the following: Different people do not always see colours alike, and when we come to the tints and shades of a colour they are much more difficult of distinction. I have examined hundreds of men in colour vision and I find that brown to many will appear as red, some even taking orange colour for it; whilst others say the browns are green, the greens blue, and purples blue. In some few cases one will say that a light red or cerise is green. Many are not aware when they have what is called "colour blindness" until it is demonstrated to them. This is probably why some state pollen from a certain source to be of a colour different from what another has seen it.

The conditions under which it is seen have also a great influence on the naming—not of the general colour, but of the tint or shade.

(*a*) Whether in small thin quantities or masses;

(*b*) The colour of the ground on which it is viewed; and

(*c*) When viewed under the microscope whether the light is reflected or transmitted. The source has its influence, daylight, oil-light, incandescent gas, or electric each suggesting different shades.

The same grains examined under these separate conditions would appear of a slightly varying tint, and different people examining them under each separate aspect would be like the men with the chameleon, they might all say its colour was different and yet all be right.

We are also unable to remember or even find names to express the various shades and tints we find in any particular colour, and sometimes the dividing line between one colour and another is so very fine that it is easy to put it either on one side or the other.

There is also a great difference in some pollens in the colour of freshly gathered and that which has been gathered perhaps only a few hours. My attention was first brought to this in the following way. When I had just started on this work I was examining a stock of bees one afternoon in an apiary away from home, when I noticed a bee on the combs with pollen of a brilliant crimson. I had not seen this colour before, so I secured the bee and relieved it of its load of pollen which I placed in a small box which I had with me. When I got home I took the pollen out to examine it, and instead of the crimson colour the pellets had assumed a dull reddish-brown. Although disappointed it taught me something respecting the fading of colour in pollen grains.

On one occasion I made a collection of pollen pellets taken from bees found on different flowers, so as to have a true record of their colours, but for the same reason such a record became useless.

Another reason for apparent difference in colour of pollen from plants of the same species is that it may be near some source of contamination, such as a railway, turnpike road, or works. These create dust and smut in the air, which settles on the anthers and petals of the flowers—I have found this very marked in some cases—whereas in others the pollen had been gathered from localities that were pure and free from such pollutions.

I think it may also be possible that climatic and soil conditions may have some influence on the colour, just as they have on the colour of houses.

(*To be continued.*)

THE VARIABLE BEE.

Shortly those who have hives amid fruit blossom will perhaps be doubling. Those who do so by putting an excluder between the two bodies will wonder whether or no queen cells will be built above the excluder. Not long ago two past-masters in bee-culture exchanged doubts on the subject, one of them never having heard of such a thing, while the other had frequently seen it. They are reconciled by the rather over-stretched maxim, "Bees do nothing invariably." The fact is we have not yet discovered the bee law in this and some other matters. Perhaps it is a question of where the youngest brood is placed, not only in which body but in which part of the body and how large the patches are. It is likely that the bees in the upper storey do not appreciate their isolation for a day or two, and that therefore they will not rear queens unless there is very young brood or eggs there when the rearrangement is made. At any rate, they are practically certain to raise queens if a nice frame of eggs is given them two or three days later. This result of doubling with an excluder seems to be more frequent in America than in this country, partly perhaps because the Americans favour the Italian bee to the practical exclusion of the black, partly because of a Continental climate and a different quality of honey-flow. I am inclined to think that the maxim ought to be not "the bees" but "The weather does nothing invariably."

I have found a piece of foundation (extra thick) that I think has lain in a cupboard since 1885 or so. I expect it was bought from Neighnour in that far age. It seems about as good as ever, and I dare say I shall use it this season, but if it is a curiosity that someone else would like to possess, a more modern sheet would suit me just as well.—G. G Desmond, Sheepscombe, Stroud, Glos.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES FROM NORWICH.

[9132] May I ask in the interests of bee-keepers and in the hope of being able to do something towards stamping out "Isle of Wight" disease what experiments are being made to find a cure, and the results, good or otherwise, and the conclusions arrived at.

A lot is learnt by failures, and probably if particulars were given it would give others an idea and they might get to work on proper lines. Much is said at meetings of bee-keepers to the effect that

the proper place to ventilate opinions is in this JOURNAL.

To me, bee-keeping seems to be hopeless, judging by the reports every week. I have only two colonies, as I cannot and dare not risk any more although I wish I could see my way clear to do so. I have the pleasure of looking after numerous colonies for other people, and one can learn a lot in that way.

I advise all to use Izal, in both syrup and candy, but quinine and Izal answers better. Izal cures foul-brood. A few stocks have been lost in spite of clean hives, &c.

Now as to the bees. Dutch and Banats are just mentioned; that does not seem to me to be enough. Bee-keepers should state their experiences with them and other races, and thereby render other bee-keepers a great service. Are they good honey gatherers? Do they swarm even should a chamber be given underneath the brood and plenty of air and room? Natives I cannot for some reason like. Of course, generally speaking, some may prove excellent, but to my mind they are not prolific enough, soon get the disease, and the honey is not always up to par.

Italians are extremely pretty and hard workers. Put a hive of each side by side, as I have done, and the difference is noticed even by strangers. Italians fly in and out as fast again as natives, their chief fault being that they cannot stand chilly and damp weather.

Some "experts" (?) recommend destruction of diseased stocks; this being the age of destruction it may appeal to some. It may be the easiest and least troublesome method to those who have plenty, but such is not the case with me. I believe in tackling the subject of diseases, experimenting and constructing till I succeed in finding a remedy, as is done in the case of infectious diseases of man. My only regret is that my financial position is against my carrying out experiments; doubtless others better placed than myself will try, report, and advise, then I hope we shall soon be on the right road to live and enjoy our bee-keeping with both pleasure and profit.—A. FROUSE, Norwich.

SHELTER FOR DRINKING WATER.

SHELTER FOR DRINKING WATER FOR BEES.

[9133] The enclosed photograph depicts a very simple and efficient cover for the drinking water of the bees. It consists of a zinc skep cover painted white, and placed on a stout stake driven into the ground to the required angle and height, a nail passed through one of the staples and driven into the wood makes it secure. To those who give this a trial it will prove an object-lesson, and fully support all that has been written on the need of keeping the drinking water protected from the voidings of the bees, for the white paint is constantly sullied by their excrement, and was in that condition when photographed.—F. W. HARPER, Watford.

HONEY JUDGING COMPETITION.

[9134] Having hitherto kept out of this controversy, I decided, after reading the letter from the first prize-winner, Mr. Price (page 72), to write and say I cannot for the life of me understand how the second prize came to be awarded. I was not a competitor, and so do not write as a disappointed one. As I am able to throw limelight, at an opportune moment, on this second prize, I here do so. On page 45 "An Exhibitor for Thirty Years" says:—"It has come to my knowledge since the competition that the second prize-winner has never kept bees, let alone exhibited. How explain away the fact of this man beating Mr. Crawshaw, who is a judge of wide experience?"

Well, I can go much further, and say, that while this point is quite true, I can state that *six months before* the competition he had not even the simplest rudimentary knowledge of bees, and I know the man (name if wanted) who gave him his first knowledge last summer. With this before us, what is the value of the competition? Mr. Price says (page 72):—"It was a far more difficult matter than I anticipated, and, in my opinion, a far harder task than placing the awards at any show. Had it not been for my vast experience, as judge and touring expert in many counties, combined with long experience as an exhibitor, I could not have attained the position (first prize-winner) that I did." I consider it a very hard matter to place Mr. Price's letter and the second prize-winner's judgment side by side, and we older bee-keepers—grey in the service—can see nothing but sheer guesswork, or an unusual fluke, in the whole business; anyway, in my estimation, it shows that would-be judges had better be trained under our qualified men.

I, for one, should watch with the very greatest possible interest another attempt (at one of our coming meetings) to see how this second prize-winner would come out, in his placing some more samples. *Then*, if he can prove his ability to correctly do so to the satisfaction of the assembly, it must be admitted he has, early in his experience, accomplished what many good bee-keepers fail to do in a lifetime. Even Mr. Crawshaw (page 4) says: "I must own to having been astoundingly astray as to the source of some of the samples. Sample No. 6 would have puzzled an archangel." But Mr. Crawshaw seems to be "a judge of wide experience," and *not* an archangel."—"PUZZLED."

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	26	2	6

WEATHER REPORT.

WESTBOURNE, SUSSEX.

March, 1915.

Rainfall, 1.08in.	Minimum on grass, 17, on 20th.
Below aver., 1.25in.	Frosty nights, 14.
Heaviest fall, .29 on 2nd.	Mean maximum, 47.2
Rain fell on 11 days.	Mean minimum, 35.6
Sunshine, 116.3 hrs.	Mean temperature, 41.4.
Below aver., 25.2 hrs.	Above average, .7.
Brightest day, 19th, 9.9 hrs.	Maximum barometer 30.414, on 9th.
Sunless days, 6.	Minimum barometer 29.490, on 18th.
Maximum temperature, 58, on 14th.	
Minimum temperature, 23, on 20th.	L. B. BIRKETT.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

[9001] *Adam Grimm?*—Would you kindly tell me through THE BRITISH BEE JOURNAL any details you may know of the life of a certain Adam Grimm, a successful American bee-keeper I believe. I wish to know especially: (1) What size frame he used; (2) what race of bee he effected; (3) what method of general management he followed. Can you tell me of any book that contains any information with regard to him?—C. L. N. PEARSON.

REPLY.—Adam Grimm was a German born in 1824. He emigrated to America in 1849 and lived at Jefferson, Wis., till his death in 1876. We do not know what size frame he used. The race of bees he kept was Italian imported direct from Italy. He worked both as a queen-rearer and producer of honey. You will get further particulars from Roots' A B C and X Y Z of Bee-keeping.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

H. A. WELLS (Nantwich).—*Surplus from swarms.*—You may get surplus from a swarm under favourable conditions, *i.e.*, a strong swarm early in May, good weather, and abundance of forage. There are no stingless honey bees.

"APIS" (Stowmarket).—*Removing bees from roof.*—Your best plan will be to remove the tiles until you can get at the comb, which may then be cut out. You should be able to secure the queen. Try a piece of sponge or other absorbent material soaked with a strong solution of carbolic acid or creosote, and placed in the barrel of the smoker in place of the usual lighted fuel. You should be able to carry the whole thing through at one operation.

INQUIRER (Ireland).—There is not a modern book on that subject. We should advise you if you cannot keep bees on modern lines to let them alone altogether. There is nothing satisfactory in simply *possessing* bees.

T. BRIGHT (Weybridge).—(1) They would probably not be worth it. (2) Yes. (3) Either that, or purchase a small lot or nucleus and unite.

Suspected Disease.

J. REID (Blantyre), H. J. YOUNG (Alton).—The bees are suffering from "Isle of Wight" disease.

"NOVICE" (Beckenham).—The bees have died of "Isle of Wight" disease. You cannot do better than get the "British Bee-keepers' Guide Book"

"JUNO" (Southwell).—We do not find any disease in the bees sent. You should be feeding the bees with syrup now if they need it. Give the syrup luke-warm, and wrap the feeder up well, and the bees will be all right. There is very little that you can do to effectively prevent "Isle of Wight" disease. You may medicate the food with quinine and keep the hives supplied with disinfectants; also see that there is a constant supply of clean water. We cannot say exactly the number of bees, but probably between 2,000 and 2,500. A good stock now should cover about six frames. The first symptoms are the bees loafing about on the alighting board and the colony showing very little inclination to work. Here and there "crawlers" may be noticed; these increase in numbers as the disease progresses.

T. A. R. (Glasgow).—The bees were too dry for diagnosis.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* **1d.** *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* **3s.** *per* **½in.**, *or* **5s.** *per inch.*

PRIVATE ADVERTISEMENTS.

TEN hives, cottage pattern, telescopic covers, zinc roofs, with nine brood or shallow frames, and rack, 10s. each; several dozens drawn-out shallow frames, 5s. doz.; rack, 1s. extra; 6 Canadian feeders, 2s. 6d. each; all good as new. —"BEES," 23, Bedford-street, W.C.

WANTED, 12 stocks bees, on frames, without hives.—PINDER, Salisbury.

WANTED, a queen, or would purchase stock in W.B.C. hive.—BUTLER, Oaktree House, Claygate.

FOR SALE, several good healthy stocks, 2s. 6d. a frame, free on rail; box 2s. 6d., allowed if returned, carriage paid, in good condition.—WATTS, Potsgrove, Woburn, Beds. v 33

A BARGAIN, 16 W.B.C. body boxes, 1s. each; 6 shallow body boxes, 9d. each; 12 section racks, 9d. each; 24 excluder, zinc, 3d. each; 1½ gross metal ends, 1s.; particulars, 1d. stamp.—J. YOUNGER, 29, Newmarket-road, Cambridge. v 31

PRIZE mead, very fine and old; exchange for honey; particulars, 1d. stamp; pure Cambridge beeswax, 1s. 6d. per lb.; sample, 2d.—J. YOUNGER, 29, Newmarket-road, Cambridge. v 32

FOR SALE, cheap, 2 W.B.C. hives, complete, price 20s. each; fittings worth the money.—Apply, COCKS, Napton Locks, Rugby. v 30

FOR SALE, splendid granulated honey, in 14lb. tins, 6½d. per lb.—Apply, BURGESS, Newport Pagnell, Bucks. v 29

ASSISTANT wanted in Apiary; work the year round can be found for a suitable man.—Apply, stating qualifications and wages required, to BOCOCK, Ashley Apiaries, Newmarket. v 28

FOR SALE, members' honey, in bulk and bottles.—SECRETARY, Herefordshire Bee-Keepers' Association, Llanwarne Rectory, Hereford. v 27

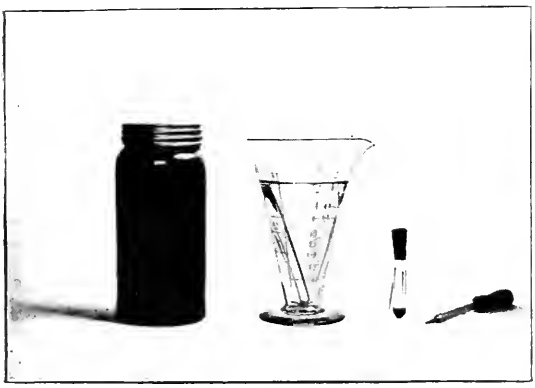
WANTED, one or two skeps of healthy bees.—C. P. OLIVER, Henley-on-Thames.

THE B.B.K.A. CONVERSAZIONE. MARCH 18TH.

LECTURE BY MR. G. HAYES, BEESTON, ON "THE SEPARATION, EXAMINATION AND PHOTOGRAPHING OF POLLEN GRAINS FROM HONEY."

(*Continued from p.* 102.)

This is not so great a task as many suppose, and the articles one requires are not very numerous. There is more perhaps in the method of dealing with it than in the things that are required. I hope you will be able to follow out the instructions I am about to give you. In Fig. 1 are the things that are necessary for the separation of pollen grains from honey. From a jar of honey (A, Fig. 1) we take with a spoon or spatula a small quantity—about half a teaspoonful.



A. B. C. D.

FIG. 1.

You will remember that the pollen grains are distributed all through the honey, and you can scarcely put in a needle point without taking out pollen grains. After taking the honey out, place it in the glass (B, Fig. 1), or if you like, a teacup, and then add to it three or four ounces of hot water; the water should not be too hot, about 140 deg. Fahr. If it is below this it does not make very much difference, except that being cooler it takes a little longer time in dissolving the honey. If a cup has been used for mixing the honey and water you then pour it into the conical glass, and allow it to stand for at least an hour. By that time nearly all the pollen grains will have fallen to the bottom of the glass, some will be on the sides. The reason is this: that you have reduced what we call the density of the medium, and instead of the pollen grains being suspended, as they were in the honey, they are now heavier than the medium, and, of course, gather towards the bottom. After they are settled you take your glass of water and pour the water off until you see a little muddy substance rising from the bottom. There should be just sufficient then left to about fill a glass tube 2in. by $\frac{3}{4}$ in. (C, Fig. 1). It is placed in that glass tube, which is kept erect, and the pollen grains fall to the bottom of it. When fallen you take out the water by means of a pipette (D, Fig. 1) until you get to the bottom, leaving only just about one dozen drops of the water which contains all the pollen grains taken out of the sample of honey from the jar. This, then, is the way to separate the pollen grains from the honey. They will not keep very long in this condition, because in the operation I find by experience that yeast germs and a few fungi spores are taken up from the

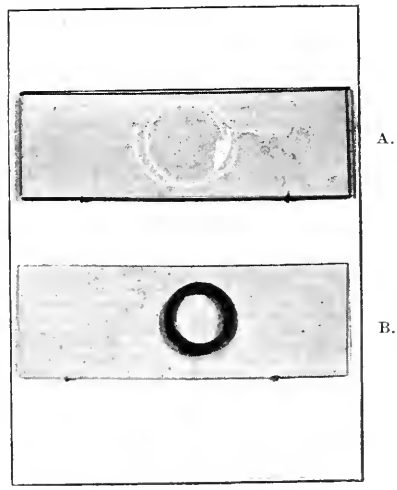


FIG. 2.

air, so that in a day or two, if no further precaution is taken, upon examination of the contents at the bottom of the tube there will be found a growth of one or both of these things. If you wish to keep it more than a day or two, it is best to at once put in a little antiseptic—such as formalin—just one drop of a five per cent. solution of this will preserve it for some days. When we wish to examine the pollen grains we have to place them on a slip of glass on the stage of the microscope.

There before you are two glass slips for this purpose (Fig. 2). You take just a

drop out of the tube with a pipette and place it in the centre of the slip. There are two slides, one with what is called a sunk cell (*a*), ground out in the glass; the other is a raised cell made by means of a celluloid ring, which is stuck on to a plain glass slip (*b*). I prefer the latter, because it keeps the pollen grains at the same level right across, and you can therefore move your slip for examination, whereas owing to the sunk cell being concave, if the slip is moved the object being examined is thrown out of focus, and 1000th of an inch or less will often put the object out of focus. These then are the things that are necessary for the separation of pollen grains from honey. Now we come to the examination, for which purpose we need a microscope. Microscopes are somewhat expensive as a rule; in fact, they cost more money than the majority of people can afford. There is one which would

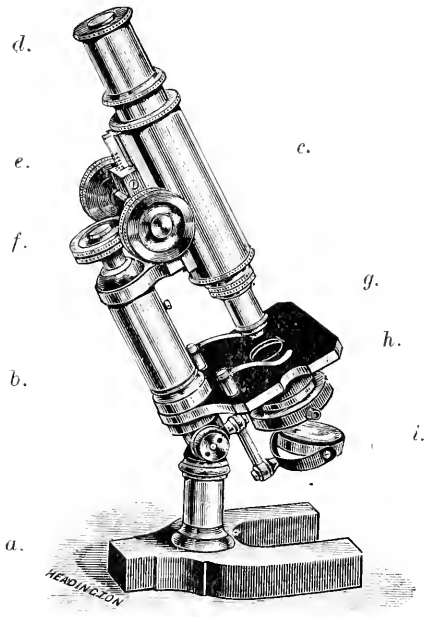


Fig. 3. Microscope.

[We are indebted to Messrs. Dollond & Co., 11, Kirby Street, Hatton Garden, London, for the use of this illustration.]

probably cost about £4 to £5. It has a single tube and everything about it is simple, but yet there is sufficient in that instrument to examine pollen grains, but when once you get on to the subject you will find that you want as good an instrument as you possibly can get. Better instruments than that, of course, cost rather more money.

In Fig. 3 we have an illustration of a better class instrument which will meet almost every requirement. The cost of these varies from £10 up to as much as £50, according to the various accessories which accompany it—the power of the objectives, &c. Briefly, it is made up as follows: (*a*) The foot; this may be of the tripod form, the horseshoe, as shown, or of some other design. (*b*) The pillar, which you will see is hinged on the foot so that it may be placed at any inclination; continuing upwards we come to the tube (*c*), which in this case is a telescopic one for greater convenience, although in many makes this consists of either a 6in. or 10in. tube. In the extreme end of this is a lens called the eyepiece (*d*), which may be had in three powers—Nos. 1, 2, and 3. At (*e*) is a rack with double milled heads for raising or lowering the whole tube to get the required distance between the object and the objective—this is termed the *coarse* adjustment, but in more critical examination the movement has to be extremely small, and so at (*f*) is provided a *fine* adjustment screw; this is marked off in divisions so that the movement may be measured. At the lower end of the tube is fixed a single or compound lens called an objective (*g*). The objectives vary in power, the lowest being a 3-inch and the highest about 1-25th of an inch, those 1-12th of an inch and over are what are called oil immersion objectives, for oil has to be used between them and the object to obtain a greater number of the rays of light passing through. These objectives are often for greater convenience placed in what are termed nosepieces. Many have accommodation for two, the one on my own instrument takes three. Below this and fixed to the lower part of the pillar we have the stage (*h*), that part on which we place the object to be examined. This may be a mechanical stage—that is, one capable of being moved between north and south or east and west by two milled heads; it should also revolve on its bed. Underneath this is fixed the sub-stage, an arrangement for carrying a condensing lens, diaphragm, &c.; the first for concentrating the light, and the latter for cutting off undesirable light passing on to the object. It is operated by a milled head raising or lowering the condenser to focus the rays of light. Lastly, we have the mirror (*i*) for diverting the rays of light upwards through the microscope. It has a plain surface on one side and concave one on the other; the latter for collecting the rays and sending them off in a pencil of light. It has a universal movement so that it can be put at every conceivable angle.

(To be continued.)

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

Procuring Surplus.

(*Continued from p.* 112.)

Others use bell glasses (Fig. 85) shows one in situation with the bees hanging for wax secretion, while (Fig. 86) shows a very good and large one completed. In all the above cases to get out the honey the combs have to be broken up.

Fig. 85.

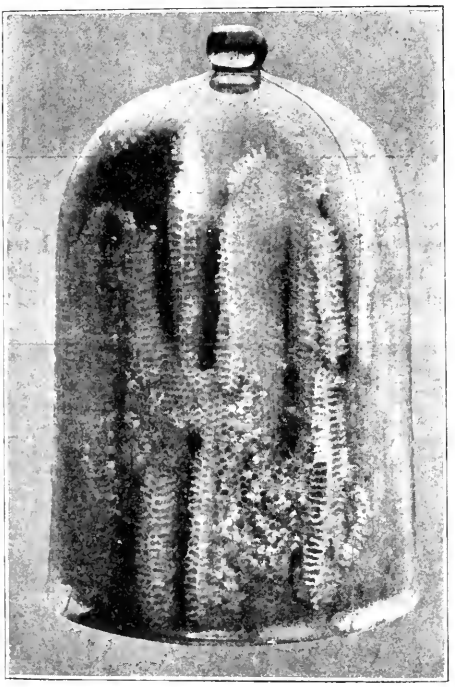


Fig. 86.

Fig. 87.

Even skeps can be supered to obtain either extracted or comb-honey. (Fig. 87) shows how this is done by means of a square board with a hole in the centre, which is fixed so that it comes in alignment with that in the skep. A shallow-frame super or skep, as in the picture, is now put on this, and covered with a quilt and roof, in this case the supers only can be dealt with as in a modern hive. It is very rarely that the skeppist can be persuaded to take this small amount of trouble, for is he not of that slow to move and conservative class—a good example of both the man and his methods is seen at (Fig. 88)—who glory in sticking to the old methods and

traditions of the past, whose grandfather's and great grandfather's apiary was as (Fig 89), and are good enough for him.

With all his stubbornness and assertion that "nobody can teach him nowt" and

FIG. 88.

FIG. 89.

that "book larning beant no good. I went to wuk when I wure foure I did, no waste o' time at skule," we love him because there is a great deal of practical knowledge of Nature and her ways crammed into his simple brain.

FIG. 90.

He would probably sneer at the spick and span modern apiary (Fig. 90), and dub the hives "booby hutches," but for procuring a quantity of saleable surplus it is *the only way*

A NOTE FROM SHANGHAI.

Our readers will no doubt be interested in the following, which has been sent to us by Mr. H. Cary, of the Shanghai Gas Company, who was a member of the Bucks B.K.A. in 1880-8. We print the advertisement exactly as worded. In his note Mr. Cary says: "I called to see the company. They have about twenty bar-frame hives, about 10 feet apart back to back, and covered with a mat to protect them from the sun. The temperature is from 100 deg. to 104 deg. Fahr. in the shade, and for seven weeks the night temperature has been not less than 90 deg."

Affair of Shirakawa Honey Bees Rearing Garden.

Proprietor S. SHIRAKAWA
K. SHIRAKAWA

Shirakawa broth Zaida garden for feeding Honey bees.
Zaida, Mitoyo district Kagawa prefecture, in Japan.
Taiseiyen, First Branch c/o Okura residence at Burchet Road, North Szechuen Road in Shanghai.

GUIDE OF BUSINESS.

Original bees, Queen of Bees & some feeding instrument for bees are sold here, anyone who bought our bees, shall be visited thrice in a month & teach you how to feed & treat them. We guarantee for you, best group of bees no doubt about to have a separate one in the next spring.

NATURE OF BEES.

Bees have the social rank on their part & works as like as humanbeings do & render mutual services cheerfully in their living.

On feeding them you can get not only interest but also some profit.

RIGHT PLACES TO FEEDING BEES.

In travelling some parts of china, we found in necessity of feeding Honey bees. So, now we open the branch firm & engage in the business in Shanghai. There are so many right places for feeding honey bees. Among those Nangking, Soochow, Hongchow, & Shanghai are best places & latter is the most suitable one because the settlement has several public flower gardens & many private flower gardens in the foreigners villas or residences.

OPEN HOUR FOR BUSINSS 8 A.M. TO NOON.

Admittance free & shall be given the perfect explanation on feeding bees if you like, and bees will be sold at any time. If you want so many groups of Honey bees, we must have contract.

CONDITION OF CONTRACT.

Honey bees shall be delivered in September.
Half price is wanted when the contract agreed.
Balance shall be paid up without delay when the Honey bees was delivered.

The Winter Cluster (p. 57).—I had thought that it was already established that the cluster expanded and contracted with variation of the winter temperature, whilst maintaining a protective husk, also that bees interchanged from the inside to the outside of the cluster. The point about which I am not quite so sure is whether they only move in their orbit during mild spells, or whether they slowly move at any necessary time, leaving behind them occasionally part of the chilled envelope, thus accounting for the discs of dead bees often found. Or is there some signal for "General Post" which usually saves them? When wintering outside, observation such as that mentioned is not possible, and can only be carried out upon colonies with deep entrances, as in cellar wintering in America. Has "D. M. M." overlooked this fact? Bees have a tendency with us to get as high as stores will allow during the winter, so that observation from beneath would be difficult even if it were possible. This winter I had three or four sets of fairly full shallow combs on several colonies, ready for spring needs. In each case I found breeding begun in the top storey, with "lashings" of honey below.

Honey Judging Competition (p. 63).—There is apparently some confusion of fact in Mr. Frankenstein's letter. He criticises adversely some difference of opinion between us which is said to have been

expressed over the Dairy Show awards. But I did not criticise his awards in the honey classes at all, and made no assertion of source or condition there, as I opened none of the exhibits. I confined my comments to questioning the awards in the wax classes, urging upon him that he should have practical acquaintance with wax-rendering before judging similar exhibits. At the judging competition, however, I referred to one exhibit which I had labelled as beginning to ferment, and I understood him to agree independently with me. It was in connection with this competition that I made remarks upon heather honey, which he appears to have entirely misunderstood. The cases I mentioned were, of course, exceptional, and I took for granted more first-hand knowledge of heather honey than his present letter suggests.

Appearance of Heather Honey (p. 51).—There is no question as to the orthodox appearance of extracted ling honey, but I have occasionally come across samples reputed to be ling honey which differed remarkably from the "gelatinous" type. Mr. Steele, of Steele & Brodie, first brought this difference to my notice, sending me samples, from a particular Scottish district, which he guaranteed to be ling honey, and which differed considerably from any honey I have ever obtained from the moor. It would, I believe, be to the general interest if he would deal with the subject, at which I will leave it. In addition to this exception, I have found samples of ling honey, or blends of ling, so spoiled by heating as to lose the typical characteristic. I have judged these to be thin samples which have been heated with a view to increasing their density. There appeared to be such a sample at the competition, and I described it in this way, wrongly as it now appears, as ling spoiled by heating, well knowing that most people would describe it as bell heather. It was in connection with this sample that my remarks as to these exceptions were made. The "bubbly" appearance mentioned is a fault due to the method of extraction, and is not inherent. If Mr. Frankenstein will examine heather honey in the comb he will appreciate this. I shall be very glad to have his order for the purpose, when he may be able to appreciate the point in another practical way! Such bubbles either predispose honey to fermentation or may be at times the direct result of the destructive process.

Anonymous Criticism (p. 71).—I have no clue to the identity of "Exhibitor," but if we have ever met at the show-bench, I believe he will not require the above assurance that I am not responsible for the description attributed to me. I can only say that if I do not know the normal characteristics of heather honey, I ought to do so, as I have not missed taking bees to the moor since I began bee-keeping. At the same time, I deplore the fact that "Exhibitor" should write anonymously. I feel that criticism should be open, and either over the writer's name or unsaid. I am by no means averse to serious criticism, as distinct from mere sparring, but let it be in a fair field, with the lists properly kept. Failure to observe the rules of the game has been responsible for many unhappy frictions in the past. Let us avoid them.

NECTAR-PRODUCING PLANTS AND THEIR POLLEN.

By George Hayes, Beeston, Notts.

(Continued from p. 113.)

FLOWERS TO GROW FOR BEES.

Bees and flowers are inseparable from each other and you cannot think of one without associating with it the other. At any rate, this is so as soon as we start bee-keeping, for then we begin to think about flowers: what they are, where and in what quantity they grow, &c., until we come to the point and ask the question: Can I grow flowers for my bees; and, if so, how must I set about it, and what kinds are best for this purpose?

It is with the object of answering those questions that I pen a few instructions as to Flowers for Bees, and How to Grow Them.

It must not be supposed for one moment that flowers *in a garden* will increase the amount of surplus honey, but they certainly will often assist in keeping up a regular supply near home, when in bad weather the bees cannot venture far away. By means of such flowers the colony may be enabled to, at any rate, keep in good condition instead of dwindling and losing heart, so that the bees are well able to take advantage of a better flow when it comes; more especially is this so in the spring of the year. Towards the end of summer flowers assist the bees to keep up late breeding. Apart from this, there is great pleasure in being able to see the bees actually at work among the blossoms, and this has given me many opportunities of making observations, either to confirm what I have read about or to find out fresh matter for myself; and it will be equally useful to others.

Bees appear to prefer flowers with an open corolla to those that are closed or partially so. They would visit a daisy in preference to one of the antirrhinum or snapdragon type, and of this class the single flowers are better than the double.

I have not yet been able to ascertain

definitely that bees have any preference for colour, although some observers state that such is the case. I am rather inclined to the belief that they visit those flowers giving the greatest amount of nectar or pollen, rather than any of a particular colour. Those wanting proof of this may plant a bed of flowers of any one kind with blossoms of various hues and they will find that if the bees visit them at all they will do so to all alike, no matter what their colour, tint, or shade.

In the following list will be found a variety of subjects so that the tastes of the most fastidious may be satisfied. Of course, it will be understood that the list is given so that each may make a selection from it of those most suitable to the grower's fancy and requirements.

To avoid repetition I give a few general instructions with regard to cultivation, which will apply to each class, which, for simplicity, is divided into two.

(1) *Annuals.*—These are plants which are raised from seed each year. The seeds are generally sown in March or April—in some cases in order to get earlier bloom they may be sown in autumn. The plants grow and blossom some time during the summer and die in autumn.

(2) *Biennials and Perennials.*—A biennial is a plant raised from seed one summer which flowers the following summer and then dies, such as wallflower or Canterbury Bell; whereas a perennial is one that is raised from seed and flowers, generally, the following year, continuing to do so from year to year. Such are more often than not propagated by division of roots, or by cuttings—*e.g.*, Christmas rose and hollyhocks.

SNOWDROPS.

Although the Christmas rose joins hands with the snowdrop, the latter is truly the first flower of spring. Neither rain nor sunshine soils its fair beauty; good or bad weather does not affect their drooping heads so long as there is clean grass or snow beneath.

We have both single and double varieties, but the latter cannot be considered double in beauty, for it lacks the simple elegant grace of the bell-shaped single blossom, although it appears more conspicuous when grouped together.

Snowdrops may be planted at all times and almost in all places. I like to see them dotted about a green lawn or in a good broad ring round the base of a growing tree; they also look nice in clumps here and there about a border.

The bulbs should be obtained from a seedsman of repute, as very cheap lots are often not worth growing. When so purchased they should be planted in October in the situation described. If they are to be planted on the lawn proceed by making a hole about 3in. deep for each, with a dibber, put in a little clean sand, on the top of this the bulb, and fill up with soil.

The flowers will be over before the grass needs cutting, and when this is first done all trace of their position will vanish.

If planted in clumps, put from 12 to 20 bulbs in each, keeping each bulb 2in. apart.

(*To be continued.*)

NORTHUMBERLAND B.K.A.

ANNUAL MEETING.

The annual meeting of the Northumberland Bee-keepers' Association was held at Morpeth, on Saturday, April 3rd, Alderman John Wilkinson, of Ashington, presiding over a large attendance. The secretary reported that the season of 1914 would be long remembered as beating all records. There was an abundance of flower honey, followed by, perhaps, the best "takes" of heather honey known for many years, and this was proved by the Northumberland bee-keepers carrying off first honours at the shows held during the past season. The financial statement showed a balance of £13 16s. 7d. Mr. A. B. Collingwood, Lilburn Towers, was re-elected president; Major F. Sitwell, and Mr. Robert Robson, of Wooler, hon. secretaries; Mr. Thomas Gordon, Wooler, treasurer; and Colonel Roddam, chairman of committee.

SUFFOLK B.K.A.

A PATRIOT'S EXAMPLE.

At the monthly meeting of the Suffolk Bee-keepers' Association held on Tuesday evening, April 6th, at Mr. T. Edgar Mayhew's office, Mr. J. Nickalls gave a lecture on the digestive organs of the bee. The lecturer described fully this interesting part of the anatomy of the bee, illustrating his remarks by carefully-prepared diagrams. Mr. Nickalls gave minute details of the glands along the alimentary tract of the bee, which secrete liquid for digestive purposes, pointing out the difference in these organs in the queen and worker and showing how admirably they were adapted to their respective functions in the life of the hive. The meeting was presided over by Colour-Sergeant C. Goodwin, of Halesworth, of the 4th Suffolks, who has been invalided home from the front for a few days.

At the close of the meeting reference was made to the death of Sergeant J. Jay, of Martlesham, of the 4th Suffolks, who was a member of the Association, and was

killed in the Neuve Chapelle action. Sergeant Jay, who was a time-expired soldier, and two of whose sons are in the Navy, rejoined the Army on the outbreak of the war, and was soon promoted to the rank of sergeant. As a bee-keeper he was very successful, and obtained large yields of honey. Last season he acted as expert of the Association in the Woodbridge district, and he will be chiefly remembered by those with whom he came into contact by his absolute fearlessness in manipulating bees without any protection whatever, and by the original and ingenious devices and methods which he introduced into his own apiary. Sergeant Jay was not a young man, and in re-entering the service of his country at this critical time he showed a fine example.

DYNAMIC EVOLUTION AND QUEEN-REARING.

Attention was recently called in the BRITISH BEE JOURNAL to a book entitled "Dynamic Evolution," by C. L. Redfield (Putnam, 6s.), that had just been published in America, and it was suggested that some of Mr. Redfield's conclusions might be worth the consideration of bee-keepers. Being interested in evolutionary problems in general, I procured a copy of the work and, after a careful study thereof, am of opinion that, if the author's deductions are correct, their importance to apiculture cannot be exaggerated. It is not very easy to express a highly technical proposition in language comprehensible to the ordinary reader; but I propose to try and give an idea of Mr. Redfield's theories, and will ask my readers to judge me leniently if I fail to make myself quite clear in places.

There are two fundamental laws governing energy. First, although its manifestation can be transformed, it can neither be created nor destroyed; and, secondly, if concentrated at one point of a body, it will gradually dissipate throughout that body, unless other energy be expended to maintain its concentration at that point. Thus, we can employ an electric current to heat the end of a bar of iron, thereby transforming electrical energy into energy of heat; but the resulting heat-energy is not greater than the electrical energy from which it has been transformed. Further, if we cut off the current, the heat dissipates throughout the bar, until the whole of the bar is of the same temperature; and we can only maintain the concentration of the heat at the end of the bar by the employment of more electric energy. In other words, in order to concentrate or to store energy, work must be performed.

If we apply these principles to the human brain, since the energy of an adult's brain is greater than that of a child's, we know that energy must have been stored there during the years between childhood and maturity. Hence we know that work has been done—and, moreover, that that work has been done within the brain or in some organ directly connected with the brain. But, so far as our knowledge goes, there is no such organ; and therefore we are justified in supposing that the work has been done in the brain itself—especially as experience teaches us that the more the brain is used the greater its efficiency becomes. Whence, then, has come this extra energy necessary for storing energy in the child's brain? Obviously from the multiplication of living cells, of which our whole bodies are made up; and the energy necessary to this multiplication is derived from the food we eat.

All this is confirmed by the well-known fact that, when a person reaches a certain age, his brain begins to fail. We know that cells are constantly multiplying and wasting away. At first the multiplication is more rapid than the decay, with the result that there is a surplus available for doing work, besides keeping us alive. There comes a time, however, when multiplication and decay are evenly balanced and there is no surplus available for storing energy or maintaining its concentration in the brain; and, therefore, the energy already stored there begins to dissipate. Later on, of course, the rate of multiplication cannot keep pace with the rate of wastage; and then the body dies.

(To be continued.)

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

INFORMATION WANTED.

[9135] Can you give me any information about the suitability of growing fruit and keeping bees in the Wye Valley?

If bees are kept to any extent there? Also if a piece of freehold land is occasionally in the market at a reasonable price?—M. J. SANDERSON, 18, Prince of Wales' Terrace, Scarborough.

[Perhaps one of our readers will be able to kindly give Mr. Sanderson the information he requires.—EDS.]

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 29th to July 3rd, at Nottingham.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from W. Herrod Hempsall, 23, Bedford Street, Strand, W.C. **Entries close May 31st.**

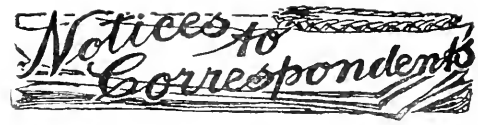
Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

[9002] *Extracting Thick Honey.*—Most of my bees have during the past winter succumbed to the "Isle of Wight" disease, leaving a large quantity of honey in several hives, which seems to be too thick to extract by the usual means. I understand the honey is fit for human food, and should be glad to know the best means of separating it from the combs?—H. A., Swaffham.

REPLY.—Keep the combs for several hours in a temperature of from 95 degrees to 100 degrees Fahr., and then extract while warm.

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	26	2	6



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

H. JAMES (Manchester).—*Disinfecting Hives.*—The best method is to scorch the inside with a painter's lamp or paint with a solution of Calvert's No. 5 Carbolic Acid, 1 part; water, 2 parts; then expose to the air until the smell has disappeared. It is advisable to wait for a time before restarting unless you like to take the risk of the disease reappearing.

R. B. P. (London).—*Old Bee Book.*—Many thanks for your cutting. There are copies of two editions of Moses Rusden's book in the B.B.K.A. Library, one dated 1679 and the other 1685.

M. BRODHURST (Southwell).—(1) Use Naphthaline and Apicure. (2) Yes.

"TRY AGAIN" (Lines.).—(1) Yes. (2) They are good tempered, but prone to excessive swarming. (3) Up to the present there is no cure for any race of bees when they have contracted the disease.

H. M. E. (Chard).—It shows that the bees are prosperous. Remove the box as soon as possible. A brief examination of the combs will tell you whether the bees need feeding or not. They may need another comb or a frame fitted with a full sheet of foundation.

Honey Samples.

X. Y. Z. (Cambs.).—It is not pure ling, although the bulk is from that source, but a heather blend of good quality.

T. HART (Llanidloes).—The honey is a good quality heather blend. It is worth 75s. to 80s. per cwt., and 1s. to 1s. 2d. per lb. retail.

Suspected Disease.

I. A. N. (Higham), F. B. THOMAS (Llandough).—It is "Isle of Wight" disease.

A. CARSON (Aintree).—(1) The bees were

too dry for diagnosis, but from the symptoms you describe the probability is that "Isle of Wight" disease caused their death. (2) It is certainly possible but not very probable, especially if precautions are taken.

TRADE CATALOGUES RECEIVED.

E. J. Burtt, Stroud Road, Gloucester.—A neat up-to-date catalogue containing a very comprehensive list of bee goods. Mr. Burtt makes a speciality of supplying hives of different patterns "in the flat," which will be found a great convenience by those who have more spare time than spare cash. We also notice several articles not listed in other catalogues. Mr. Burtt will send the catalogue gratis on application.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade ***advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as "Business" Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.***

PRIVATE ADVERTISEMENTS.

TO CLEAR, quantity W. B. C. hives, strong, 10s., including empty section or shallow rack six section racks, complete, 4s. each; six shallow boxes and frames, foundation wired, 4s. 6d. each; never used; twelve dozen shallow drawn out frames, 5s. doz.; rack, 1s. extra.—X. Y. Z., BEE JOURNAL, 23, Bedford-street, W.C.

ASSISTANT wanted in apiary; work the year round could be found for suitable man, able and willing to assist on farm when not required with bees.—Apply to C. BOCOCK, Ashley Apiaries, Newmarket. v 28

FOR SALE, 50 stocks of bees without hives; many just imported from the Island of Jersey, where disease is unknown.—Particulars from Managers, BRITISH BEE JOURNAL.

FOR SALE, the property of an officer now in France, stocks of bees, with hives. Price and particulars to SERVICE, "B.B.J." Office, 23, Bedford-street, Strand, W.C

TEN healthy stocks of bees for sale, on standard frames; no disease in this district.—R. S. WEBSTER, North Burton, Hunmanby, East Yorks. v 36

EXCHANGE for bees, two ten- and two twelve-frame hives, nearly new telescope lifts; or sell 8s. and 10s. each. T. WOOD, 20, Shirley-street, Saltaire, Shipley. v 37

PRINTING PRESS, metal type, accessories, 10s.; bargain.—Particulars, W. WEBSTER, 291, Normanton-road, Derby. v 38

HIVES; six 12-frame, four W.B.C., four standard frame, one nucleus; offers wanted; transferring bees heather hives.—Apply, SPICER, Bridge Gate House, Warmley, Bristol. v 39

FOR SALE, very cheap, heather honey press, honey extractor, ripener, and knife; all best makes.—MRS. S. GREENWOOD, near Kirkheaton Railway Station, Kirkheaton, Huddersfield. v 40

WHITBY and District Bee-keepers' Association desire an expert to tour about 100 members in May.—Apply, stating terms, to CAMPBELL R. PINKNEY, Whitby, Yorks. v 41

RUN HONEY; required 1 cwt. fine clover, English, Welsh or Irish; carriage paid for 50s. cash.—Sample to ROWE, 6, Kings-road, Cardiff. v 42

THREE stocks, 1914 queens, guaranteed healthy, 25s., or with W.B.C. hives, painted, almost new, £2.—ARTHUR, 226, West George-street, Glasgow. v 43

BEES; old English stocks, on standard combs, wired, guaranteed healthy; price 30s. each.—F. A. BEAN, Snaith, Yorkshire. v 44

WANTED, healthy stocks of bees in straw skeps and natural swarms during the swarming season. — PRYOR, Breachwood Green. v 45

FOR SALE, reasonable, 3 complete hives (2 large), many appliances and sections.—CULLING, The Farm, Gunton Hall, Lowestoft. v 46

WANTED, first swarm from guaranteed healthy South Essex stock.—Particulars, DAVIS, Jeweller, Westcliff. v 47

FOR SALE, first grade sections, 7s. per dozen, free on rail.—NELSON, Paradise-cottage, Appleby. v 48

FOR SALE, stocks of English blacks, on standard frames, healthy and in splendid condition; open to expert inspection.—EDWARD BAKER, Pickering, Yorks. v 49

20 GOOD stocks bees in good wood hives, 25s. each; approval; deposit.—F. HARRISON, Poultry Farm, Pickering. v 50

PURE English honey in 28 lbs. tins, 7d. lb.; sample, 3d.—WAIN, Thorpe Bank, Wainfleet. v 51

REMINGTON No. 7 typewriter, as new, cost £20, sacrifice £5 15s.; will guarantee; free trial willingly; no dealers.—WHITE, Dome Chambers, Arcade, Northampton. v 52

QUANTITY of heather honey and heather blend for sale, in lb. jars; prices and samples.—Wilson, Apiary, Belper. v 53

FOR SALE, several good healthy stocks, young queens, in combination and W.B.C. standard frame hives. — HOBBS, Camlot-cottages, Barnet. v 54

WANTED, 12 stocks bees, on frames, without hives.—PINDER, Salisbury.

A BARGAIN, 16 W.B.C. body boxes, 1s. each; 6 shallow body boxes, 9d. each; 12 section racks, 9d. each; 24 excluder, zinc, 3d. each; 1½ gross metal ends, 1s.; particulars, 1d. stamp.—J. YOUNGER, 29, Newmarket-road, Cambridge. v 31

PRIZE mead, very fine and old; exchange for honey; particulars, 1d. stamp; pure Cambridge beeswax, 1s. 6d. per lb.; sample, 2d.—J. YOUNGER, 29, Newmarket-road, Cambridge. v 32

WANTED, one or two skeps of healthy bees.—C. P. OLIVER, Henley-on-Thames.

BELGIAN RELIEF FUND.

We have at our office a 28lb. tin of Welsh heather honey, a hockey stick, three bound volumes of "Record," and an Irish Bee Guide. What offers, please, to Manager, British Bee Journal Office, 23, Bedford Street, Strand, W.C.?

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, April 15, 1915. Mr. J. B. Lamb presided, and there were also present Miss M. D. Sillar, Messrs. G. S. Faunch, G. W. Judge, J. Smallwood, J. Herrod-Hempsall. Association representatives: G. Bryden (Crayford), G. R. Alder (Essex). In the absence of the secretary through indisposition Mr. J. Smallwood kindly undertook his duties.

Letters expressing regret at inability to attend were read from Messrs. T. Bevan, F. W. Harper, C. L. M. Eales, Rev. F. S. F. Jannings and Colonel H. F. Jolly.

The minutes of council meeting held March 18 were read and confirmed.

The following new members were elected: Mr. H. J. Grenfell, Mr. G. Grant, and Mr. W. M. Martin.

The following Associations nominated representatives to the council, and they were accepted: Devon, Mr. McCullah; Worcestershire, Mr. A. R. Moreton; Cheshire, Mr. N. Grant Bailey; Northumberland, Mr. W. J. Sanderson; Berkshire, Mr. A. D. Woodley; Essex, Mr. G. Horscroft.

The report of the finance committee was presented by Mr. Smallwood, who stated that payments into the bank for March were £31 5s. 7d., the bank balance being £233 12s. 9d., payments amounting to £30 7s. 1d. were recommended.

The report of the examining board was presented by the chairman, and it was resolved to grant the final certificate to Miss E. M. Penrose.

The secretary was instructed to convey to Mr. T. W. Cowan the council's thanks for his consenting to continue to act as chairman.

An application for preliminary examination was made by the Suffolk Association, and the same was granted.

Next meeting of the council, May 20, 1915, at 23, Bedford Street, Strand.

NORTHUMBERLAND B.K.A.

ANNUAL MEETING.

The annual meeting of the Northumberland Bee-keepers' Association was held at Morpeth, on Saturday, April 3rd, Alderman John Wilkinson, of Ashington, presiding over a large attendance. The secretary reported that the season of 1914 would be long remembered as beating all records. There was an abundance of flower honey, followed by, perhaps, the best "takes" of heather honey known for many years, and this was proved by the Northumberland bee-keepers carrying off first honours at the shows held during the past season. The financial statement showed a balance of £13 16s. 7d. Mr. A. B. Collingwood, Lilburn Towers, was re-elected president; Major F. Sitwell, and Mr. Robert Robson, of Wooler, hon. secretaries; Mr. Thomas Gordon, Wooler, treasurer; and Colonel Roddam, chairman of committee.

NORTHANTS B.K.A.

ANNUAL MEETING.

The 32nd Annual Meeting of the Northants. Beekeepers' Association was held on Saturday, April 10th, in the Hull Memorial Buildings, Northampton. Mr. F. Ward presided over a fair attendance, which included Messrs. Arlidge, Bocock, Bubb, Belgrove, Norman, Masom, Talbutt, Old, and others.

The Secretary read the report for the past year, which expressed regret at the ravages caused by the "Isle of Wight" disease amongst bees. In some parts of the county they are nearly all dead. The annual show, he stated, was held on August 5th and 6th, in connection with the Municipal Flower Show in Abington Park. Mr. W. Herrod, F.E.S., judged the exhibits, the silver medal of the British Beekeepers' Association being taken by Mr. Ward, the bronze medal by Mr. Bocock, and the certificate by Mr. Chambers; and prizes to the value of £8 in money were also awarded to the exhibitors. The balance-sheet showed the receipts to have been £44 15s. 9d., and the expenditure £44 0s. 11d., leaving a balance of 14s. 10d. in hand. The report and accounts were passed, and considered on the whole satisfactory.

The following officials were elected:—Hon. secretary, Mr. R. Hefford, Sunnyside, Kingsthorpe; hon. stewards, Mr. R. Brawn (Kingsthorpe) and Mr. W. T. Munn (Northampton); hon. treasurer,

Mr. G. E. Atkins (Northampton); hon. district secretaries and committee, Mr. J. R. Truss (Ufford), Mr. F. Old (Piddington), Mr. C. J. Burnett (Northampton), Mr. A. Hiscock (Barton Seagrave), Mr. C. E. Billson (Cranford), Mr. W. H. Chambers (Northampton), Mr. G. Page (Holcot), Mr. J. Bubb (Bugbrooke), Mr. W. Osborn (Piddington), Mr. O. Orland (Flore), Mr. G. Masom (Yardley Gobion), the Rev. J. P. Frend (Collingtree Rectory), and Mr. E. Thompson (Kettering). The appointment of president and vice-presidents was left to the committee.

It was decided, if arrangements could be made, to hold a small show in Abington Park in August, and to give the honey exhibited in Class W. to the wounded soldiers.

A vote of thanks to the chairman brought the meeting to a conclusion.

SOMERSET B.K.A.

A largely attended meeting of the Bridgwater Branch of the Somerset Beekeepers' Association was held on Wednesday afternoon, April 14th, at Holy Trinity Parish Hall, under the presidency of Mr. H. J. Rudman, who occupied that position in the unavoidable absence of the Mayor (Councillor F. G. Haggett). During the afternoon a highly-interesting lecture was delivered by Mr. T. W. Cowan, F.L.S., F.G.S., F.R.M.S., etc. (the well-known authority on bee-keeping). The lecture, entitled "Bee-keeping by Our Allies," which was illustrated by lantern slides, described the different methods practised by bee-keepers in France, Belgium, Russia, Servia, and Japan. The lantern was manipulated by Mr. W. H. Kitch and Superintendent Williams. The meeting closed with a hearty vote of thanks to Mr. Cowan, on the motion of Mr. L. E. Snelgrove, seconded by Mr. H. R. Poole.—H. H. W.

THE B.B.K.A. CONVERSAZIONE, MARCH 18TH.

LECTURE BY MR. G. HAYES, BEESTON, ON "THE SEPARATION, EXAMINATION AND PHOTOGRAPHING OF POLLEN GRAINS FROM HONEY."

(*Continued from p.* 118.)

Fig 4 will perhaps make plain how the examination is made. It will be seen the light (1) is streaming on to the mirror; it is then reflected upwards through the diaphram and condenser (2) on to the object which is placed on the stage (3), the image is then passed on through the objective (4) and is brought to an enlarged focused image at (5). This, then, is seen through the eyepiece and by it again enlarged to the eye.

A special lamp is nearly always recommended and often used, but for ordinary work, even up to a 1-12th inch objective I get sufficient light from an inverted gas burner on a pendant fixed over the table, and although I have done a good deal of photography by this same source, a stronger light is sometimes needed, and it is best to have a source of a given intensity, so I now always use for the latter purpose an incandescent light fixed 2 feet from the microscope on a portable stand on the table and connected up to

FIG. 4.

the gas supply with a piece of flexible tube.

We have two jars of honey, one light and one dark in colour, and we are going—in imagination now—for this has been prepared previously—to take a sample out of each and separate the pollen grains in the manner already described. Let us take first those from the light honey, place a little of the residue from the tube over a slide and focus, when we see as Fig. 6. These, it will be observed, are mostly from the clover (c), but amongst them will be found some of the heather (H), and one or two from other sources. From this we assume the honey has been gathered chiefly from the clover with a slight mixture of heather; the flavour of the honey when tasted also confirmed this.

Treating the grains separated from the dark honey in the same way as the former we see them as depicted in Fig. 7. The majority of these grains, it will be noticed, are mostly heather (H), with a fair

proportion of clover (c), and others in minority, and would be decided to be a strong heather mixture, and again on tasting, the flavour confirmed this.

pollen grains are magnified to a much greater extent. If you wish to examine more critically to see the markings on the pollen grains, then you use a ¼-inch,

FIG. 5.

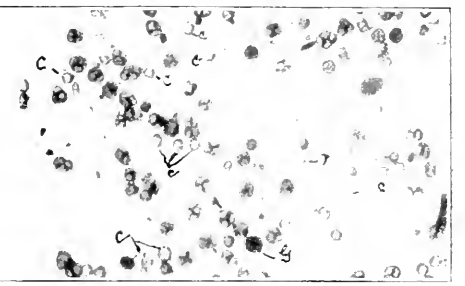


FIG. 6.

Photos Nos. 6 and 7 were taken by the camera through the microscope with a 1-inch objective. The next (Fig. 8) from the same slip is taken with a ½-inch ob-

Fig. 8, which is again from the same slip and in which the pollen grains are enlarged to a much greater size, and it also shows the markings more clearly. You

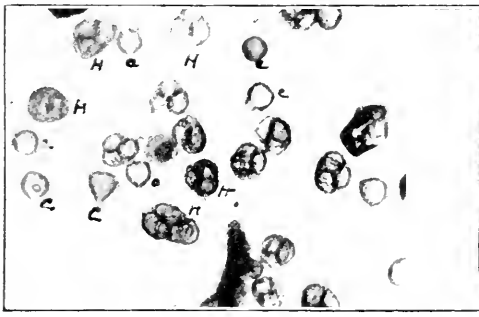


FIG. 7.

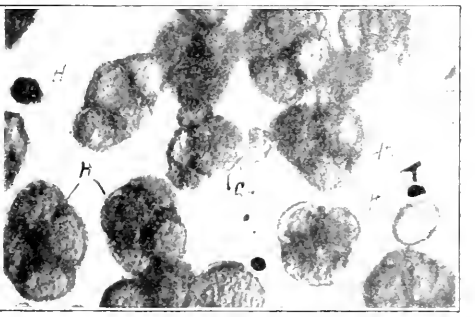


FIG. 8.

jective. You see it considerably reduced the area, the *number* of pollen grains being much smaller than in 7, but the

notice in this photo not only pollen grains from the heather, but also from the white clover.

(*To be continued.*)

BEE-KEEPING AND SUNDRIES.

Chaucer's "Aprille with its showres sweete," its billowy clouds, and bursts of sunshine is a month we all love, because it gives us the foretaste of a coming summer.

In the South the country will soon be rich in beauty of every shade of green, and the fruit gardens a sight to behold with their roofs of blossom.

In such a late cold spring as this we shall appreciate more the genial rays of the sunshine when the bees commence work in real earnest, and it is a pleasure to stand under a plum tree in blossom and listen to the deep murmur of the bees above. There are evidences of a remarkable fruit bloom this season.

The gooseberry is an early and copious yielder, and there is no mistaking pure gooseberry honey—that honey with a pronounced flavour of the ripe fruit and with a pleasant green tint and strong distinct smell. Many bee-keepers will like to capture a surplus of fruit blossom honey, especially in sections, and rightly so, for being early it commands a ready sale.

In my own mind, however, I feel convinced that it is better to convert the

honey into more bees ready for the main flow towards the end of May.

Supering early often means that the brood nest is restricted and the outside combs clogged with honey. Consequently, there are not enough bees to pile up honey when the clover comes. But move some of the heavy combs away and add a few frames of nice fresh foundation near the outside brood frames, and the queen will lay much faster than before.

With a good queen an extra chamber of ten frames of comb or foundation placed on top without an excluder is a real necessity, and eight of the ten combs are often filled solid with brood.

The population is the first thing to increase. When you have got it, it is a fairly easy matter to keep the bees well employed.

Just before the flow an excluder slipped between the two bodies will confine the queen to the lower portion, so that the top chamber can be filled for extracting; or if sections are desired it can be moved away when the brood is sealed and given a queen. But for increase it is better to leave the queenless portion on the old stand, give them a queen, and then super.

In carrying out operations through the season it is far safer to avoid mixing up the combs and appliances of one hive with those of another. Much disease can be avoided by care in this way.

And, furthermore, none but vigorous and strong colonies should be tolerated. Dwindlers are always unprofitable, and the very best remedy is to apply a good charge of sulphur at night. A stock that will not thrive certainly cannot provide honey for its owner.

Finally, I believe a good season is ahead. Let us see that our bees are ready.—A. H. Bowen, Coronation Road, Cheltenham.

THORNE HORTICULTURAL AND BEE-KEEPERS' SOCIETY.

Owing to the earlier closing of the licensed houses, the Horticultural and Bee-Keepers' Society held the monthly gathering in the lecture room of the Public Library on Monday evening. Mr. C. C. Elmhirst presided. The lecturer was the Rev. F. S. F. Jannings, F.E.S., Rector of Warmsworth, and his subject, "Bees-wax, Honey, and Maple Syrup." As is well known, Mr. Jannings is an enthusiastic apiarist, who has invented appliances tending to simplify and cheapen the industry or hobby to the amateur. The lecturer illustrated his subject with scores of samples of honey, bees-wax, mead, honey vinegar, and maple syrup, collected from many of our colonies and several other parts of the world. The adulteration of honey and bees-wax was dwelt upon, and the method of the bee in producing the latter was explained in a very interesting manner. The lecturer enlivened his discourse with a number of personal reminiscences not devoid of humour, and at the close a very hearty vote of thanks was accorded him on the motion of Dr. Arbuckle. It was resolved to have the May lecture at the library.

NECTAR-PRODUCING PLANTS AND THEIR POLLEN.

By George Hayes, Beeston, Notts.

(*Continued from p.* 123.)

FLOWERS TO GROW FOR BEES (*cont.*).

WINTER ACONITES.

These flower very early in February if planted in a warm, sunny position and are eagerly sought after by the bees, more particularly for their pollen. The tubers can be obtained in October and planted in that month. It is best to prepare one good patch of them, and after the ground has been dug, about 3 inches of soil should be taken off the area of the patch to be planted and about a quarter of an inch of sand put on, then place the tubers about three inches apart and cover with the soil removed. If the tubers are sound there will be very few that will miss.

They may also be obtained from the woods in some localities, where they are found growing wild, and may also be planted in fairly open shrubberies, but in this case they will flower later, owing to the shade.

CROCUS.

Every bee-keeper should certainly grow crocuses, for they not only supply natural pollen when it is greatly needed, but can be used as vehicles for supplying artificial pollen to the bees, as stated in the article dealing with the pollen grains. In October get good bulbs of any colour, yellow predominating, as they prefer this variety, not because of its colour but because the corolla is easier of access than most of the other varieties. Dibble them in with a setting-stick two to three inches deep, putting a little sand at bottom of the hole for the bulb to rest on, to prevent its decay, and cover with soil. After flowering the leaves grow on to a good length and look nice whilst green. When they begin to die it is as well, in order to make them look tidy, to put them into a plait or even twist them together and tie the ends until quite dead, when a slight pull causes the leaves to come away altogether without disturbing the bulbs, which should remain with-

out further attention, to flower the following spring.

The young bulbs form on the top of the old one, and, of course, each year get nearer the surface. When they do get close to it, the best plan is to take them up and plant them deeper.

(To be continued.)

DYNAMIC EVOLUTION AND QUEEN-REARING.

(*Continued from p.* 124.)

But the brain not only accumulates a store of energy; it also accumulates a *capability* of storing more. This is obvious when we consider that education not only imparts knowledge, but also increases the facility for absorbing more knowledge; and Mr. Redfield's theory is that, when energy is directed into an organ, the multiplicatory energy of the cells composing that organ is stimulated. This theory certainly seems capable of explaining the well-known facts that a muscle grows stronger by being exercised, and that a cow yields more milk with her second calf than with her first, and more still with her third—and so on up to about her tenth. The result is, then, that, so long as energy is continually developed in an organ (and not merely developed there and then allowed to dissipate by disuse), the older an individual is, the more capable he or she becomes of developing energy in that organ—up to the point, that is, where the balance is struck between cell-multiplication and cell-decay. And this result must be of universal application in any organ of any living individual. This is Mr. Redfield's first conclusion.

His second is that accumulated *capability* of energy (or, as we may call it, accumulated potentiality) is transmissible to progeny. If an English and an Esquimaux child be educated side by side, the latter not only will fail to keep pace with the former in the acquirement of knowledge, but will very early reach a point beyond which it is incapable of acquiring more, while its rival's limit of capability in this direction is probably never discoverable by its teacher. Both children may be fed on the same food, as regards quantity and quality; or the Esquimaux may even receive more and better food than its rival; yet still the result will be the same. Obviously, then, the English child has inherited something from its parents that the other has not; and that something is a higher potentiality of the brain, which potentiality was transmitted by the parents, after being accumulated by them.

But by Mr. Redfield's first conclusion, accumulation of potentiality depends on age. Therefore, the differentiation in brain-potentiality of the English and Esquimaux races must have originated in a difference of age in their ancestors at the time of parturition; so that, when we get back to the common ancestor of the two races, the Englishman descends from a younger brother of the ancestor of the Esquimaux. This, of course, is not a necessary corollary. The difference could have been brought about by a general tendency to later marriages on the English side at more recent periods of the pedigree, even if the English ancestor were the elder brother. But it illustrates the bare outline of Mr. Redfield's contention; and, according to him, it is fully supported by an examination of the pedigrees of prize stock, where it is found that the very finest horses, dogs and milch-cows display among their ancestors an enormous preponderance of individuals that were of ripe age when they gave birth to the particular progeny whose name also occurs in the same pedigree. And, moreover, in the case of race-horses especially, it appears from the pedigrees that the harder those ancestors were worked up to the moment of reproduction, the finer their present-day descendants are found to be. In fact, our author's second conclusion may be stated thus—that a high potentiality of energy in offspring is proportional (within limits) to the age of the parents at the time of reproduction, provided that the concentration of energy in the parents has not been permitted to dissipate by disuse.

Now, seeing that Mr. Redfield quotes various instances from publicly recorded pedigrees in America, it is impossible to doubt the truth of his statements; and, therefore, it must be admitted that we are face to face with some very curious coincidences—if nothing more. It is well known that many breeders prefer to breed to the blood of a winner rather than to a winner itself; so that it is clear they have discovered that, for some reason, the non-winning brother or sister of a famous winner will yield better progeny than the winner. They admit, however, that they do not know why this should be so; and Mr. Redfield says it is because the winner is so valuable that he is bred from quite early in life for financial reasons, and is, moreover, not risked on the race-track (in the case of a horse) after he has established his reputation, but is kept in pampered ease in a stall. His less valuable brother, on the other hand, is raced hard to a later date or used as a hack, in order to recoup his owner, to some extent, for the loss entailed by his rearing and training

and subsequent ill-success; and when he is finally bred from, it is as a sort of afterthought and quite late in life. And the singular thing is that, so soon as breeders began to think, from a study of pedigrees, that there "might be something in" breeding to the blood, they found that results did not always come up to their expectations. Why? Presumably because they at once treated the unsuccessful race-horse as valuable.

And now we come to Mr. Redfield's third conclusion. Energy in the lactic glands of cattle is only capable of manifestation in the female sex. But, on examining the pedigrees of prize milkers, he found that, although a large proportion of the female ancestors were of ripe age, the bulls with which they were mated were more generally young, but themselves the sons of old cows. From this he infers that, where energy is only capable of manifestation in one sex, the capability of manifestation is transmissible directly in proportion to the age of the parent of that sex, but only in proportion to the age of the corresponding parent of the other parent.

Though he does not mention it, one cannot help thinking that, if his inference is correct, this may have been the cause of sexual peculiarities. Take, for instance, the beard in man. We know that, among savages, men only take wives when they have attained a certain standing in the tribe; while the wives they take are young girls. Now, if (as seems likely from a comparison with the apes) women were originally as capable of growing beards as men, according to Mr. Redfield's theory, the mere fact that, through countless generations, bearded men had married girls whose beard-growing energy had not been developed would tend to fix the growth as a peculiarity of the male sex. It is a fact, at any rate, that scientists have never been entirely satisfied to accept Darwin's theory of sexual attraction by means of peculiar adornments—for the simple reason that the theory failed to make it clear how the initial differentiation arose between the sexes. Indeed, Darwin himself saw this difficulty.

* * * *

Mr. Redfield's three conclusions are, then, as follows:—(1) Capability of developing energy in an organ increases, up to a certain limit, with the age of the individual, provided that energy be continually developed in that organ. (2) This capability is transmissible to progeny at the same potential at which it exists in the parent at the moment of reproduction. (3) Where energy is only capable of manifestation in sex A, a breeder should aim at selecting the A-parent of ripe age; but the B-parent, though it should itself be the offspring of a mature A-parent, should be young, because thereby the required capability will be concentrated in its A-progeny and not be dispersed between its progeny of both sexes.

Now, seeing that, among the higher hymenoptera, the capability of manifestation of all useful energy is concentrated in the females to a degree that is without parallel elsewhere in Nature, it is obvious that, if Mr. Redfield's three conclusions are correct, their importance to the bee-keeper is far greater than to any other class of breeder. And, indeed, it seems to me that, although Mr. Redfield may be quite in error, the peculiar position of the drone in the economy of the hive is itself a support to his argument. It has long been admitted that the progeny of youthful parents are more vigorous (and probably more aggressive) than others; and, therefore, it would seem likely that a drone bred from a yearling queen would be more likely to mate than the son of a two-year-old mother. But most books on bees state that a hive headed by a yearling queen is less liable to swarm than one headed by a two-year-old. In other words, we must presume that competent observation has established the fact that bees, in their natural state, rear young queens, as a rule, from two-year-old mothers; and thus, for countless generations, the females have received the greater share of transmitted potentiality.

And here we come to a point that concerns us very much just now. As energy is directed into an organ to repel the attacks of disease-germs that have entered the organ, it must be subject to the same rules as govern any other form of energy; and, therefore, if Mr. Redfield's conclusions are correct (I do not, be it observed, assert that they are), the fact that an individual becomes more and more immune to a disease with each recovery from an attack must be due to the same accumulated capability of developing energy in the region of the attack. But Mr. Redfield carries the discussion a step farther. Reasoning that we are constantly surrounded by disease-germs, he points out that we must be constantly resisting their attacks, even though we may not "catch" the disease; and, therefore, the older a person grows (up to a certain limit), the more he accumulates a capability of developing resistant energy. Hence, by analogy of his second conclusion, the older a person is at the moment of reproduction, the more will immunity (or, rather, power of resistance to diseases) be inherited by his offspring.

(To be continued.)

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

A PROFITABLE STOCK.

[9136].—You might be interested to hear my experiences. I started keeping bees in 1913 with a swarm bought from a well-known firm, but they either had when they arrived or immediately contracted Isle of Wight disease, and died out in October. But a friend had given me a swarm, which I did not move to my garden till February last year. In May I made an artificial swarm from them, and twice the week after the same hive swarmed; one swarm I hived on a new stand, and the second I returned to the parent hive after cutting out about eleven queen cells. From that same hive I got nearly 80lbs. of honey.

During the autumn one of my stocks was robbing a hive which was badly affected with Isle of Wight disease, and I expected all of my bees to get it, but so far they have survived, and the robber hive seems the strongest of the three. I am just doing my spring cleaning, and am looking forward to the honey season. —NONCE.

PAINTING THE INSIDE OF HIVES.

[9137].—I note "D. M. M.'s" objection to painting hive interiors, and think he has every reason on his side. As a practical painter, I would point out that unless a sufficient number of coats be given to make an impervious covering little good can come of paint as a disinfectant, while if this impervious surface is formed of good material we might as well line the hive with glass. All moisture would condense, and the heat would be very apt to fluctuate. Again, even if good materials are used, unless the wood is thoroughly dry shelling will take place. I would suggest to those who believe in paint that they finish with a coat of bath enamel, as this will stand moisture better than ordinary oil paint. Bee-keepers would be wise if they either make their own paint from genuine white lead or get a friendly painter to do so for them. The ready made article sold at oilshops, &c., is absolutely valueless as a preserver. Three thin coats are better than four thick ones, and four thinly applied coats of good white lead paint are sufficient for any woodwork. Twenty-four hours should be allowed between each coat. I saw in Helpful Hints an article on hive painting; if those wishing to paint their own hives will follow the rules laid down they will not go far wrong. My opinion, therefore, is paint thoroughly outside and burn out and scrub the inside.—G. J. FLASHMAN.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

[9003].—*Autumn Feeding in the Spring.* —The only honey crop we get in this district is from the heather, and as there is very little time in which to feed bees in the autumn when they come from the moors at the end of September, I should like your opinion on the advisability, or otherwise, of rapid feeding them with thick syrup now, and when the combs are sealed taking them away to give them back in autumn. I have frequently seen this method suggested, but before adopting it I should like your opinion.—W. T. FIELD.

REPLY.—This plan may be followed. Keep the stored combs in a dry place.

[9004].—*Brood in Shallow Frames.*—In the autumn of last year I left three supers of shallow combs partly filled with honey on three hives of bees; I now find brood in all of these supers, in one of them quite a lot of brood. I am afraid the bees have left the body box, which has any amount of honey. Will you please advise me through the *B.B.J.* how to do in this case? Will bees work down to body box, or will I have to drive them down?—J. C., Wigtownshire.

REPLY.—Take away all combs not occupied by brood, and close the others up with division boards. Cover the top bars of the brood frames exposed behind the

division boards so that bees cannot get out. Allow the bees to work down, and as soon as you find larvæ in the bottom combs, make certain the queen is there, and place a queen excluder between them and the shallow combs in the usual way. In about twenty-two days all the brood will be out of the shallow combs and the bees established below.

[9005].—*Renewing Combs.*—I shall be glad to know when you think it desirable to put new combs into hives. Should I do so when I go through them for the first time? I have not done so yet, owing to cold winds; and am I to put them into the centre and take away some outside ones, and how many new ones in each?—A. P.

REPLY.—It is an excellent plan to renew two or three combs in each hive every year. Remove, say, two combs when packing up for the winter, choosing the oldest, or any that are malformed, or contain too much drone-comb. If this was not done last autumn, do it now. If they contain honey the cappings may be bruised and the combs placed behind the division board, which must be packed up to allow the bees to pass underneath and clean out the honey. The combs may then be taken away, cut out of the frames and burnt, or melted down for the wax, their place being taken by a new sheet of foundation, or, what is still better, replace the frame with a new one as well. The new foundation should be given to the bees when they need more room; give one frame at a time next to one of the outside combs of brood. Do not on any account divide the brood nest with a sheet of foundation, or an empty comb, so early in the season

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

"WILLOW" (Bexhill).—*Transferring Bees from a Skep to a Frame Hive.*—(1) The secretary of the Sussex Bee Keepers' Association is Mr. C. A. Overton, Beecroft, Crawley. (2) Fit the frames with full sheets of worker foundation, place them in the brood box, and cover the top bars with a sheet of American cloth or other material, in the centre of which cut a hole about 3 inches less in diameter than the bottom of the skep. Place the prepared hive on the stand occupied by the skep, lift the latter from its floor-board and set above the frames. Pack round the bottom of the skep with warm coverings so as to make the lower hive as warm as possible. When eggs and larvæ are found in the lower combs, remove the skep and ascertain if the queen is also on them. If she cannot be found you must "drive" the skep until she is secured and placed in the new brood box. A queen excluder is then put over the top bars and the skep replaced; in about twenty-two days all the brood in the skep will have emerged from the cells, and it may then be removed entirely, leaving the bees established in the new hive. You should purchase "The British Bee-Keepers' Guide Book."

"ANTS" (Worth).—*Destroying Ants.*—Pour some boiling water on the nests, or a strong solution of carbolic acid and water, or a solution of 1oz. of cyanide of potash in 1 pint of water. The latter needs using with very great caution, as it is a deadly poison. You have done quite right; feeding with warm syrup will also help.

"NONCE" (Tonbridge).—*Utilising Extracted Syrup and Honey.*—You may use it either way, but we should prefer to add enough water to make it about the same density as the syrup used for spring feeding, and then feed it back.

W. BUTLER (Barrow-in-Furness).—*Refuse from Wax Extracting.*—It is the usual refuse accompanying wax extracting. There is always a certain amount even from the cleanest combs, but there is more bulk than weight. It does not indicate adulteration. The amount of wax you have secured—7¼lbs. from forty-eight shallow combs—is quite up to the average.

W. GOODALL (Harrogate).—*Utilising Beeswax to Make Sealing-wax.*—We are sorry we have not the time to make a minute search through back numbers for several years. If you can give us the year we will be pleased to look it up and reprint.

W. P. SILWALL (Kettering).—As soon as drones are emerging. (See "Guide Book," page 125.)

S. H. DAVIS (Westcliff).—We are sorry we do not know anyone.

C. D. (Chippenham).—(1) We cannot say, as it depends on the strength of the colony. The bees will utilise the frames as soon as the skep is crowded. (2) Shallow frames. (3) The queen would probably go up, especially if there was not much drone comb in the lower boxes. (4) Yes; that would be the only safe plan.

"FREDA" (Oundle).—(1) Use shallow frames. (2) If the hives are crowded there will be no harm in placing the non-swarming chambers in position now. (3) Take off and extract as soon as they are all sealed over, then you may put them back to be refilled. (4) No; the insurance does not cover your own family, employees, animals, or birds. (5) You may purchase the drinking-fountain from any appliance dealer. The shelter is a zinc skep cover, fixed in the manner described by Mr. Harper. (6) Fix it on the top of a brood box fitted with frames and foundation, and allow the bees to work down. See answer to "Willow."

Suspected Disease.

"WORKMAN" (Ayrshire).—The symptoms point to "Isle of Wight" disease as the trouble. They vary somewhat with different colonies. Up to the present there is no cure.

E. HAYES (Settle.)—The bees were too dry for diagnosis. Judging from what you say the probability is they were too weak to stand the winter. Under the circumstances you may venture to use the hives and combs again.

A. OWEN (Wolverhampton); M. E. WATSON (Renfrews), JOINER (Derbys.), E. TAYLOR (Bootle).—It is "Isle of Wight" disease.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 29th to July 3rd, at Nottingham.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretaries 23, Bedford Street, Strand, W.C. **Entries close May 31st.**

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	26	2	6
Leicester and Rutland B.K.A.		10	6
	£26	13	0

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of March was £2,299. From a return furnished to the *British Bee Journal* by the Statistical Office, H.M. Customs.

The value of the honey imports for February was £3,507, and not £3,567 as given in *British Bee Journal* for March 25.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS.

TO CLEAR, quantity W. B. C. hives, strong, 10s., including empty section or shallow rack; six section racks, complete, 4s. each; six shallow boxes and frames, foundation wired, 4s. 6d. each; never used; twelve dozen shallow drawn out frames, 5s. doz.; rack, 1s. extra.—X. Y. Z., BEE JOURNAL, 23, Bedford-street, W.C.

ASSISTANT wanted in apiary; work the year round could be found for suitable man, able and willing to assist on farm when not required with bees.—Apply to C. BOCOCK, Ashley Apiaries, Newmarket. v 28

FOR SALE, 50 stocks of bees without hives; many just imported from the Island of Jersey, where disease is unknown.—Particulars from Managers, BRITISH BEE JOURNAL.

FOR SALE, the property of an officer now in France, stocks of bees, with hives.—Price and particulars to SERVICE, "B.B.J." Office, 23, Bedford street, Strand, W.C.

BEES; old English stocks, on standard combs, wired, guaranteed healthy; price 30s. each.—F. A. BEAN, Snaith, Yorkshire. v 44

WANTED, healthy stocks of bees in straw skeps and natural swarms during the swarming season. — PRYOR, Breachwood Green. v 45

FOR SALE, stocks of English blacks, on standard frames, healthy and in splendid condition; open to expert inspection.—EDWARD BAKER, Pickering, Yorks. v 49

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, first grade sections, 7s. per dozen, free on rail.—NELSON, Paradise-cottage, Appleby. v 48

20 GOOD stocks bees in good wood hives, 25s. each; approval; deposit.—F. HARRISON, Poultry Farm, Pickering. v 50

QUANTITY of heather honey and heather blend for sale, in lb. jars; prices and samples.—Wilson, Apiary, Belper. v 53

A BARGAIN, 16 W.B.C. body boxes, 1s. each; 6 shallow body boxes, 9d. each; 12 section racks, 9d. each; 24 excluder, zinc, 3d. each; 1½ gross metal ends, 1s.; particulars, 1d. stamp.—J. YOUNGER, 29, Newmarket-road, Cambridge. v 31

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

PRIZE mead, very fine and old; exchange for honey; particulars, 1d. stamp; pure Cambridge beeswax, 1s. 6d. per lb.; sample, 2d.—J. YOUNGER, 29, Newmarket-road, Cambridge. v 32

WANTED, one or two skeps of healthy bees.—C. P. OLIVER, Henley-on-Thames.

FOR SALE, members' honey, in bulk and bottles.—SECRETARY, Herefordshire Bee-Keepers' Association, Llanwarne Rectory, Hereford. v 27

FOR SALE, strong healthy stocks of bees on eight frames 20s., or with hive, 30s.—BUTLIN, Hartwell, near Northampton. v 24

WANTED, a complete comb of both a bad and mild case of Foul Brood.—HERROD, "B.B.J." Office.

HEALTHY stock bees and hive for sale, 30s.; inspection invited.—69, Auckland-road, Ilford. v 77

PURE Welsh honey, light, in 28lb. tins; heather honey, in 1lb. jars; price and sample, 3d.—THOS. HART, Llanidloes. v 76

ELECTRIC Phonograph, value £4; exchange for honey or extractor, &c., and cash.—J. DRAPER, Park Gate, Swanwick, Hants. v 72

HONEY, about 2 cwts., first quality granulated honey, in 28lb. tins, for sale.—Price and sample 3d., from W. T. BARTON, Barrow, Bury St. Edmunds. v 71

FOR SALE, ten drawn out supers, guaranteed healthy, 3s. each; reversible cage extractor, £1, ripener, 6s.; nearly new.—E. RACEY, Commonwealth, Emneth. v 70

SWARMS of bees for sale; May, 3s. per lb.; June, 2s. 6d. per lb.; guaranteed free from foul brood, and healthy.—HAMBROOK, Church Farm, Newington, Sittingbourne. v 69

GOOD Devon honey, 20 28lb. tins, 10 25lb. tins, at £3 per cwt. on rail.—E. BLACKMORE, Halthaies, Bradninch, Devon. v 68

ONE 1914 Dutch queen bee for sale, healthy, 5s.—CROWE, Stawell, Bridgwater. v 66

GUARANTEED healthy, natural swarms at 3s. 6d. lb. CHAPMAN, Chelston Cottage, Bodmin. v 67

WANTED, wax extractor, good condition, cheap.—TOWNSEND, Lydbrook, Glos. v 73

SWARMS, healthy, from W.B.C. hives, for sale, May, 15s.; June, 12s. 6d.; boxes returnable.—RIDER, Sandon-road, Leek. v 75

SIX LBS. Dadant weed foundation, extra thin, 2s 5d. per lb.; Howard's Bingham smoker, nearly new, 2s.—J. YOUNGER, 29, Newmarket-road, Cambridge. v 74

BLACK Wyandotte bantams' eggs, pure, 2s. 6d. doz, carriage paid.—TOPHAM, Draycott, Derby. v 66

HAVING obtained a larger one, will sell small treadle grindstone, 10s.; also 12in. lawn-mower; both in excellent condition.—HERROD-HEMPSALL, Apiary, Luton, Beds.

HAVING more bees than I can manage, have decided to sell some hives and stocks; up to date and healthy. What can I book for you?—URIAH WOOD, expert, Arnold, Notts.

WANTED, for cash, strong, healthy stock Italians, on frames.—DART, Staplefield, Crawley. v 65

EXCHANGE, pure bred chickens, day old, for honey or bees.—BECK, Airton, Leeds. v 64

TWELVE healthy stocks of bees for sale, on Standard frames; no disease in this district.—MR. J. COLECLOUGH, 5, High-street, Hirwain. v 63

FOR SALE, twelve strong, healthy stocks of bees, on eight frames, £1 5s. each, carriage paid, crates returnable, cash with order.—G. A. GILLETT, New-road, Moreton-in-Marsh, Glos. v 61

FOR SALE, two W.B.C. hives, with brood chambers, crates, excluders, lifts, 14s. each, nearly new; one ditto, with brood chambers and lifts, 10s.; five sections, crates, with dividers, 10d. each; 200 sections, 4s.; smokers, 1s.; three Porter clearers, 1s. each.—H. TURK, Rivers Corner, Sturminster Newton. v 62

FOR SALE, Standard frame hive, with bees; one empty hive; two sections; four shallow frame racks; five queen excluders; Porter super clearer; bottle feeder; smoker; honey extractor, with cog gear; all clean and in good condition, £3 the lot, cash, or deposit.—C. WICKS, Tarlton, near Cirencester. v 60

FOUR eight-frame stocks, healthy, young queens, hatching brood, plenty food, 23s. 6d. each, on rail in travelling box; no "Isle of Wight" in district; A1 best heather sections and extractor.—W. BURN, Church-street, Whitby. v 59

WANTED, stocks of healthy bees, on frames; exchange Green's lawn mower or pedigree flat coated retriever, or cash.—Apply, MOLE, Lindridge, Sutton Coldfield. v 58

FOR SALE, 2 cwts. fine English honey, at 50s. per cwt., in 28lb. tins; also 80 W.B.C. hives, zinc covered, joiner made, two shallow supers to each, guaranteed interchangeable, good as new; three extractors, rapid and slow feeders; best offer taken; must be cleared, owing to removal shortly; inspection invited. — W. CARTER, The Apiaries, Burwell, Cambs. v 55

COUNTRY apiary, not had "Isle of Wight" disease, eight stocks healthy bees, on wired Standard frames, in travelling boxes, no hives, 25s. per stock, carriage forward.—PARSONS, London Joint Stock Bank, Ltd., 52, Witham, Hull. v 57

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

Editorial

BELGIAN RELIEF FUND.

We have at our office a 28lb. tin of Welsh heather honey, a hockey stick, three bound volumes of "Record," and an Irish Bee Guide. What offers, please, to Manager, British Bee Journal Office, 23, Bedford Street, Strand, W.C.?

We are sorry to say that just on going to press we learn that the name of Capt. Hadfield, the Secretary of the Lincs. B.K.A., is among the list of officers wounded in Flanders. We hope his wound is not of a serious nature.

THE B.B.K.A. CONVERSAZIONE, MARCH 18TH.

LECTURE BY MR. G. HAYES, BEESTON, ON "THE SEPARATION, EXAMINATION AND PHOTOGRAPHING OF POLLEN GRAINS FROM HONEY."

(*Continued from p.* 129.)

In dealing with pollen grains you must be careful that you get no contamination. If you are only dealing with one sample, of course there is not much fear; but if you are doing more, unless you are very careful, you will be apt to mix the pollen grains in the utensils used and so cause confusion. So I would warn you to be very careful, and when you use the pipette this especially should be well cleansed with clean water before using on a fresh lot, and the glass slip should be washed before putting the fresh supply on. In doing this, use plenty of water and where possible a little friction, for pollen grains are often found to be very tenacious.

Again, you will require to move your pollen grains about on the slip to enable you to get at their true form. This can be done by means of a bristle fixed in a wooden handle and using the end of the bristle for the purpose. This operation will, to a beginner, be very difficult, owing to the reversion of the image, but practice will soon enable it to be done.

It is always recommended that a cover glass—a small thin piece of glass made for the purpose—should be placed over the object to be examined, but if this was done we could not use the bristle, and for this reason it is best left off, and it should *not* be used when photographing the grains. By tilting the microscope stage backwards and forwards you cause the grains to move and may in this way see their form, but I do not consider it nearly so good as moving the pollen grains with a bristle. You must remember, too, that pollen grains alter in form very considerably under the different conditions in which they are seen. If you take note of the form of any pollen grains in the dry state—*i.e.*, as they are on the anthers of the flowers, they will often be found to have assumed a different form when placed in honey or in water, and often even on the legs of the bee. The microscope, of course, will help you to realise these conditional forms as you meet with them, for they are often keys to the source or plant from which they come.

We must now consider the photographing of pollen grains. To make a photo-micrograph of a pollen grain is not, as may be realised by this, an easy matter. As so many people speak of these as micro-photographs, may I here explain that a photo-micrograph is a photo of something very small, whilst a micro-photograph is a photograph of something large reduced to microscopical dimensions, such as the small views we find in knick-knacks purchased at the seaside resorts.

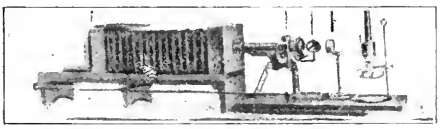


FIG. 9.

The usual apparatus necessary for this is as shown at Fig. 9, and consists of the following: (*a*) The source of light, which may be an oil lamp, an incandescent burner, acetylene gas, oxyhydrogen light, or even an electric arc light. (*b*) A condensing lens for collecting the rays of light and concentrating them on to the microscope (*c*), which you will observe is bent into the horizontal position to coincide with the other apparatus, the mirror (*d*) being turned out of the way as the rays now enter direct. The slip containing the object to be photographed is placed on the stage (*e*), and the eyepiece end of the tube inserted into the aperture of the camera which usually holds the camera lens, which is not required in this case; the image is then focused on to the camera focusing screen (*f*), and dealt with in the ordinary way for taking a photograph.

Now this arrangement is fairly well all right for photographing any object that is *fixed* on the slide, but it is unsuitable for the purpose we have under consideration, for our pollen grains are simply laid

in the ring-cell in the water as we take them from the tube, we therefore require the same arrangement of apparatus in a *vertical* position.

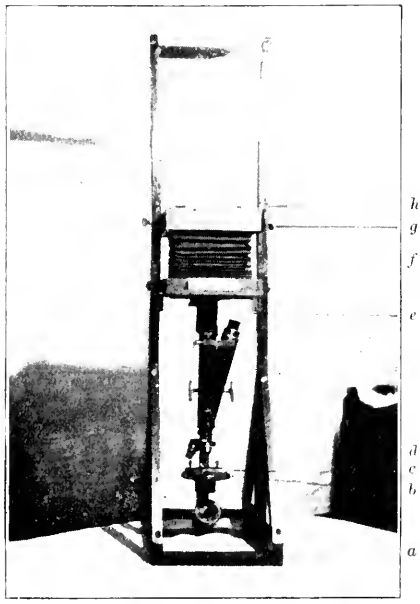


Fig. 10.

In Figs. 10 and 11 you will see the arrangement I made for my own use. I make a good deal of my own apparatus

Fig. 11.

for two reasons: First, it gives me pleasure to do it, and, secondly—a consideration with me—it saves expense.

In this vertical arrangement it will be observed that my microscope is binocular, that is, it has two tubes, one for each eye, and this gives us what is known as a stereoscopic view or a kind of image in relief. To accomplish this a prism is fixed above the objective, and whilst allowing the image to pass straight through it and up the straight tube it also diverts it into the side tube. The microscope is set quite perpendicular, and after the image has been focused the stand (*a*) with camera (*f*) complete is placed over it—both should, of course, stand firm on the table. The junction (*e*) between the microscope and the camera is made by a tube of a little larger diameter than the tube of the microscope, fastened to the underside of the camera, which drops over the microscope tube, so that the image formed goes right on to the focusing screen (*h*). (*b*) is the stage, (*c*) the slide, and (*d*) the objective.

The tube is composed of zinc or cardboard covered by black velvet, the latter extending 2 inches below the bottom of the zinc tube, so that the lower part is flexible, and when the stand is placed in position a rubber band which is kept on the higher and rigid portion is drawn down to the flexible part and grips it round the tube of the microscope and so prevents any stray light entering the camera at that point. If we now place our heads under the black cloth (*i*) (Fig. 11) on top of the camera we shall see the image on the focusing screen (*h*), and we can proceed to get it clearly defined by using the fine adjustment screw of the microscope. To enlarge or reduce the image with the same objective it will be necessary to extend or shorten the length of the camera. This is done by the two set screws (*g*), one on each side.

You will, in some cases, find it difficult to see the markings on the pollen grains because they are so faint, as you may be using a high power and only a small amount of light passing through; or it may be that your pollen grains are very transparent, and in this case will be difficult to photograph. Under such circumstances we may stain the pollen grains. This is not a difficult matter. All you have to do is to take about 1 drop of an aniline or other dye, say, fuchsine or erosene, and add to 1dr. of water, put this in the tube containing the pollen grains, and after standing for thirty minutes wash it out by filling tube with clean water; then when the pollen grains have settled, remove the coloured water, leaving only a drop containing the pollen grains. Repeat this until you get clear water. They will now photograph better than otherwise.

(*To be continued.*)

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

QUEEN REARING AND INTRODUCTION.

Leaving out the human element, success in bee-keeping depends entirely upon the mother in the hive. Unless she be the best it is possible to produce, and of the right age, the results will not be up to the average. Just as success in obtaining

Fig. 1.

good photographs depends, not upon an elaborate camera, but upon the lens with which it is fitted, so in the stock the detail or importance is the queen.

In breeding all kinds of live stock strain is as important as the breed. The distinction between the two is not generally understood. Breed denotes the family, while strain is the possession of known qualities for any particular purpose, which are intensified by selection when breeding. Thus with poultry, take, say,

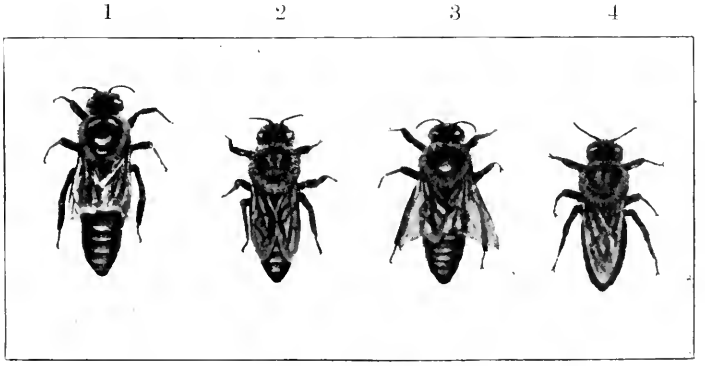


Fig. 2.

twenty Houdan fowls, all of identically the same parentage and character, and give half to two separate people. One specialises in egg production and breeds for this alone, while the other does the same to obtain table birds. In the course of a few years two entirely different strains are evolved from the same breed, one being prolific egg producers, the other not good layers but excellent table birds.

While I am quite ready to admit that excellent Queens are sometimes produced

where no attention is paid to their breeding, and that where every care is taken indifferent queens will occasionally make their appearance on account of atavism, they are accidental exceptions, and the bee-keeper who year after year consistently strives to obtain the very best is the one who makes the most profit.

The bee-keeper must first decide upon the qualities he requires from the following: (*a*) comb building; (*b*) producing extracted honey; (*c*) tendency to swarm or otherwise; (*d*) constitution for the better resistance to disease; (*e*) working qualities; (*f*) disposition. The male is the predisposing factor in the last, and should not be lost sight of when breeding Queens.

Age must also be taken into account. The mother is most prolific in her second year, *i.e.*, a queen reared in 1914 will be at her best in the spring of 1915, which is really her first full season, and, except for breeding purposes, no Queen should be kept beyond that period, which virtually means that all stocks worked for honey production should be requeened every Autumn.

The most successful honey producer I ever knew followed this plan for years, and although he possessed but six stocks he obtained young Queens with very little trouble by means of nucleus hives made by himself at a cost of about sixpence each.

As seen in the photograph of his apiary (Fig. 1) one of these was placed in front of each stock, a little to one side to be out of the line of flight of the bees. Before the honey flow each nucleus hive was filled from the stock behind it, and a Queen from the selected mother was reared therein. Immediately after the last super had been removed the Queen in the stock was killed, and at the end of twelve hours the nucleus and stock were united.

A record should be kept of the age and breeding of all Queens; this saves a vast amount of trouble, which is bound to arise if we trust to memory. It is not necessary to follow an elaborate system, a post card upon which all particulars required are briefly entered, kept on the top of the quilt of the stock in which the Queen to whom it applies is living, is all that is necessary. It is better than a book, for if the Queen is moved the card is kept with her.

Until a great deal of experience has been obtained, it is not easy to tell even approximately the age of a Queen. The experienced person cannot define exactly how it is done, he forms his opinion by intuition. The photograph (Fig. 2) will enable the reader to form some idea of the different appearance of Queens of varying ages. No. 1 is a Queen I kept for five years for breeding purposes on account of her valuable properties (strain). No. 2 is three months old. No. 3 had reached the end of her first full season, while No. 4 is a day old virgin. Compared, it will be seen that No. 1 is bulky in comparison to the others, the wings are badly torn and frayed, the abdomen is quite free from hairs, and is shiny in appearance. The movements of such a Queen are slow and deliberate, one might almost say halting. No. 2 is not so large, and has that alert sharp appearance possessed by young Queens. The wings are perfect, and held well in position; the abdomen is covered with soft, downy hair. Her movements would be best described by a beginner who attempted to catch her, especially when being examined for the preliminary certificate of the British Bee-keepers' Association. No. 3 shows the gradual increase in bulk which takes place, her wings are slightly torn, and the wear of the hair upon the abdomen can be distinctly seen. Her movements are much slower than No. 2. The virgin, No. 4, is the smallest of all. She is silver grey in appearance on account of the newness of the hair covering her body, the wings are folded very tightly, and at one day old she is fairly agile.

(*To be continued.*)

DYNAMIC EVOLUTION AND QUEEN-REARING.

(*Continued from p.* 132.)

Now, what is the practice among queen-breeders? The "British Bee-keepers' Guide Book" undoubtedly lays it down that queens should be bred from two-year-old mothers; but as the reason given for this is that, by allowing a queen a full season's trial, we are well able to judge of her qualities, and since, in practice, the egg-laying quality of a queen (which is, after all, the main thing from the

bee-keeper's point of view) can be judged by the rapidity at which her stock builds up in the spring, it seems possible that breeders may incline to ignore the precepts of the "Guide Book" in this respect. If this be so, it is probable that they are influenced by three perfectly reasonable considerations. In the first place, if we breed from two-year-old mothers, each generation occupies two years, and, therefore, the "fixing" of desirable qualities takes double the time. Secondly, it would appear preferable (and, indeed, Mr. Redfield admits the point in regard to other animals) that the queen-daughters of a young queen are more vigorous than those of a two-year-old. And, thirdly, if it be true that a stock headed by a yearling does not swarm so readily as another, one would naturally expect that there should be a better prospect of eliminating the swarming impulse from the race by breeding from queens that have never yet had the smallest inclination to swarm. These considerations are, as I say, perfectly reasonable, and may well have influenced our queen-breeders; and yet they may have caused harm to the race, both from the point of view of fertility and from that of resistance to disease. I do not say that harm *has* been so caused, for I do not know the practice of our queen-breeders nor whether Mr. Redfield's conclusions are justified; but it might be as well to take thought of what we are doing.

(*To be continued.*)

NECTAR-PRODUCING PLANTS AND THEIR POLLEN.

By George Hayes, Beeston, Notts.

(*Continued from p.* 131.)

FLOWERS TO GROW FOR BEES (*cont.*).

MIGNONETTE.

This is an annual, but will not, like some other annuals, stand even a mild winter out of doors. It should be sown from March to July for succession of bloom. That sown last will be of most service to the bees, for it will bloom in September and October until the frosts cut it down, and so supply the bees with something when there is very little about in the autumn.

THE YELLOW MARGUERITE.

This is the hardy low-growing plant which sends up its stems 12 to 16 inches high with a daisy-like flower of yellow hues, and must not be confused with the half-hardy greenhouse plant bearing the same name. It provides early pollen and some nectar.

It is best propagated by division, which should be done immediately the flower stalks have died down. Each crown should be set singly, but three or four may be set in a group 4 inches apart, and if the weather is dry at the time, attention should be given to watering until the divisions have got well rooted.

CORN-FLOWERS (*Cyanus*).

This is the favourite Blue Bottle of the cornfields, which has been cultivated and improved so that we get corn-flowers in varying shades of blue and red and some without colour at all. The sweet sultans belong to this genus.

They are mostly annuals, but if treated as biennials finer plants are obtained and they also flower much earlier. It is generally only necessary to sow them for one year, as they shed their seed freely, and in the autumn and spring many young plants will be found dotted about the garden, and from these a selection may be made of those which it is required to retain. When the seeds are sown they must be severely thinned out and not more than three be left in each group, and if sown in autumn not more than one plant should be left. If the plants have to be transplanted it is best to take plenty of soil with the roots, otherwise they are likely to die. Some bees will nearly always be found on these flowers whilst they last.

CHRISTMAS ROSE.

This flower is never found without its attendant bees on those days when the temperature is high enough for them to get abroad. So assiduous is this attention that the bees will often be found looking round the decaying corolla after the seed capsules are well developed. It comes into bloom—as its name indicates—about Christmas time and continues into January. It is truly the last flower of the year, and is a perennial, although it can be raised from seed, but it is a long time before the seedlings get sufficiently strong to flower. It is therefore best to purchase a good clump from the florist's, which may be obtained at from 6d. each upwards, according to its size. It will thrive in almost any position, providing it has a fairly decent soil, but it very much resents being moved from place to place; it should therefore be planted where it can remain for years. As soon as the flower buds appear a small hand light or other glass protection should be given to ward off the wet, which would otherwise soon soil the pure white petals after the flowers had opened.

Here is a list of flowers which—contrary to the belief of many—are *not* worth growing—for various reasons—for the use of our hive bees, although they are beautiful and fine for decoration: Honeysuckle,

sunflowers, perennial asters (Michaelmas daisy), aquilegias, nasturtiums, and sweet peas.

(To be continued.)

RANDOM JOTTINGS.

By Charles H. Heap, Reading.

STARVING COLONIES.

We have reached an important and critical time in our pursuit of bee culture. Colonies are rapidly increasing for the great work that lies before them, but unless care is taken many tragedies will be recorded. I have been among the bees a good deal of late, and find that already the tragedies have been not a few. Many good stocks have perished from hunger. I have seen scores on the verge of starvation, and one or two in the last stage of weakness before death puts an end to their suffering. Because the sun has not been scorching their backs some bee-keepers have made the weather an excuse for not having that peep under the quilts which is necessary in early spring in order to make sure that the supply of food is sufficient.

LOOK OUT FOR DISEASE.

As breeding progresses towards its maximum disease will reveal its presence in colonies which became infected last year, or perhaps earlier. Where "Isle of Wight" disease appears it is folly to keep the stock with a view to securing profit. A stock once smitten is sure to die; at least, no authenticated case of complete recovery has so far been recorded.

A VALUABLE REMEDY.

In the case of foul brood, measures should be taken promptly to get rid of the disease. In bad cases destruction by fire is the quickest, cheapest, and best method of accomplishing this. Slight cases may be treated with "Apicure," a sound remedy if properly applied. Emphasis needs, however, to be laid on the words "properly applied." "Apicure" is not capable of performing instantaneous miracles; but some people are so parsimonious that they try to cure half-a-dozen stocks with as much material as is required for one. The result is failure and money wasted. Enough "Apicure" to serve one stock for a season can be secured for the value of 3lbs. of honey at the low price of 6d. per lb., but by keeping down the mortality from the disease from the beginning of the season (to say nothing of ultimate cure), the investment is covered several times over.

DISINFECT THE SMOKER.

One point in dealing with foul brood, often forgotten, is that it may be communicated by the hands and the tools used, such as the smoker, the scraper, and the chisel or screwdriver used for loosening frames. Where there are diseased and healthy stocks in an apiary very great care should be taken to wash and disinfect the hands between the manipulation of one hive and another. Hives known or believed to be healthy should be manipulated before those which are diseased, or believed to be diseased, are touched. If possible, separate tools should be used, especially smokers, which easily become transmitters of disease. The smoker is used a good deal during manipulations, and it is an easy matter for bacilli or spores to be transferred from the combs, or quilts, by the fingers to the smoker, and then from the smoker to the combs of another hive. For the same reason carbolic cloths should not be used indiscriminately in manipulating diseased and healthy stocks. Tools should, of course, always be disinfected as far as possible after use with an infected stock.

DERBYSHIRE NOTES.

Whenever the weather has been fine during the past week I have been engaged in spring-cleaning my hives and changing the stocks. These stocks have come through the winter well, on heather-stores only, and I am again confirmed in my opinion that heather honey is quite a suitable food for wintering on. For years I have never lost a stock by wintering on heather stores.

I have this year specially noticed the great consumption of stores that takes place in March when bees are busy breeding. A cursory examination of hives in Frebruary (the quilts were just lifted) showed quite a quantity of stores left for each stock. The spring-cleaning showed that, failing a natural source of supply very shortly, the bees will have to be fed. The great change has all come in a month. Bee-keepers will do well to pay attention to this point and not suppose that stores a month ago mean stores now.

The season here is quite a fortnight later than it was last year, but so far as I have seen stocks are in good heart and ready to push on whenever the proper time comes. The best stock I have seen so far covered nine frames with bees, and had five of brood on April 10. In the same apiary a fortnight ago, foul brood was found in a stock purchased last year. I advised treatment with "Apicure." This was done, and now, without any other treatment, the stock seems to be absolutely cured. Not only is the young brood healthy, but the bees have cleared out all the diseased larvæ. I do hope that the editor will allow this to appear, and not

suppress it in his modesty because it appears to take on the character of a testimonial.

A last word. Sugar is dear, but for all that do not let bees starve for lack of a pint or two of syrup given at the right time. The interest on the money thus spent will far outweigh anything that can be got by investing the money elsewhere.

D. Wilson.

BEES LIKE AFTERNOON TEA.

Yes, and they are very particular as to the colour of their tea service; they prefer a delicate blue-and-white, they "sharpen their stings" at the very sight of a vulgar red drinking dish. My plan is this: Erect a stand about 18 inches high and 5ft. or 6ft. from the centre of your stand of hives; upon the erection place a blue-and-white plate well filled with *spent* tea leaves, upon the top of them place a rack (which some bee papers would wrongly designate a "crate"). The rack I have invented and made consists of two cross pieces of wood ¼in. square, upon them are nailed (and the nails "clinched") slats ⅛in. square, ¼in. apart, forming a circle 8in. in diameter. On cold mornings I generally pour warm water on the top of the rack. It is a delight to watch the thirsty bees alight on the slats, bend down their heads, raise their abdomens, and lap up their tea. It is most important to establish a drinking fountain early in the spring, before the bees have fixed upon some distant pond or stream, and so get chilled and possibly succumb through having to travel long distances for their water supply. I believe great loss of life, both to bees and brood, is caused by neglecting to supply water in the early spring.

Cheshire, in Vol. II., page 124, says: "*And water for thinning down the inspissated honey to fit it for brood-feeding, is eagerly sought for by the little gatherers, who often venture to face the yet chilly wind at the cost of their lives.*"

Hence the necessity of having a supply of water close at hand. The desire for liquid goes on all day.

I would quote the following from the Georgics (Virgil):

Book IV.—"Whether the water may be a stagnant pool or a flowing stream, throw into the midst of it branches placed crosswise, and large stones, that they may be able to alight upon these frequent bridges, and spread their wings to the summer sun, if the impetuous east wind has by chance dispersed those that lag behind, or immersed them in the flood. Around these places let green cassia, and far-smelling wild thyme, and store of strong scented savoury blossom; and let beds of violets sip the flowing rill."

Evidently the ancients recognised the importance of a bountiful water supply for their bees.

Turning to modern times, there is an excellent article in the *Australian Bee-keeper*, dated February 15th, 1915, headed

Water: Its Necessity to Bees and its Uses.

The writer, Mr. F. R. Beuhne, states, among other things, "The prevailing idea being that bees drink to slake their thirst, the same as do animals and humans. When natural supplies of drinking water are absent, and the want has to be supplied artificially, it is found that much more is carried into the hive than could possibly be consumed by the adult bees."

He also dwells upon the necessity of feeding with syrup in the early spring.

Hoping this epistle on the necessity of an early water supply for our bees will be helpful to novices and other bee-keeper friends.—F. S. F. Jannings, F.E.S.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

A PECULIAR MALADY.

ECZEMA FROM HANDLING THE FRAMES, SECTIONS, AND COMBS OF LIVING HEALTHY BEES.

[9138] Last honey season I took off my first racks of sections and probably got stung a time or two, but thought nothing of it, and up to bedtime felt all right. After being in bed and asleep some time, I woke up with a terrible irritation—hot, dry, burning sensation—on face, hands, between fingers, wrists, forearms, inside of thighs, knees, &c., &c., eyelids swelled and eyes closed up. Could not see. Wired for medical man at once, who treated me for eczema (for six weeks). After two days' intense suffering the malady gradually subsided, but I discovered afterwards that it always began again on a Monday night, and also in a lesser degree on a

Thursday night. I mentioned this to the doctor. "What had I been eating? Honey?" No. Green peas, fish, ham, beef, beer and whisky, all these had to be knocked off and many more good things, and still the same outbreaks occurred. At last, on a Sunday, of all good days, I was pronounced cured.

The following day an order came in for some honey which was on the hives. This was taken off in the afternoon, and the same night the eczema started as bad as ever. At last I had discovered the cause. On Mondays the honey was taken from the hives, Thursdays the sections, &c., were cleaned and honey extracted, and after each operation my malady started afresh.

I mentioned this to Mr. W. Dixon, the Leeds bee expert, who replied that he had never heard of a similar case.

I may just mention that the *Primula obconica* affects me in the same way, also, in a lesser degree, the Dutch hyacinths. I am a healthy man, subject to rheumatism, which bee stinging has not yet cured, but, curious to relate, when the eczema was "on" the rheumatism was "off," but I know which was easier to bear.—A. Garvey, The Nurseries, Holme, York.

[It has been known that some constitutions are more or less affected by eating honey or coming in contact with the odour of the hive. We have heard of cases of nettle-rash or erysipelas being produced in this way. Mr. Heddon suffered terribly from what was called "bee disease" and which produced in him bronchial catarrh and asthma with violent irritation of the eyelids every time he opened a hive, until he gave up attending to bees himself. Eczema is a catarrhal affection of the skin and may be induced in the same way. —Eds.]

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 29th to July 3rd, at Nottingham.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretaries 23, Bedford Street, Strand, W.C. **Entries close May 31st.**

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	26	13	0

NOVELTIES FOR 1915.

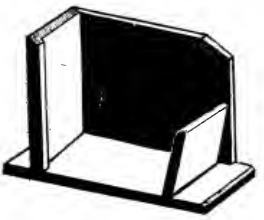
THE "BOWEN" SECTION FOLDER.

I am sending you particulars of an article I have devised to facilitate the quick folding of sections. This folder has been given a good test in putting up sections, and I find it much handier and better to use than the old pattern section block.

The sections are clasped at the second joint, and laid across the folder so that the split top end is lowest. By slight pressure the second joint is forced down into position at the bottom of block.

This folds three sides at once, the split top end being then pushed into the dovetail by the right hand, ready for fixing the foundation truly. Sections can thus be folded quickly and accurately without risk of breakage.

The "Bowen" Section Folder is priced at 1s. 6d. each, and can be obtained either



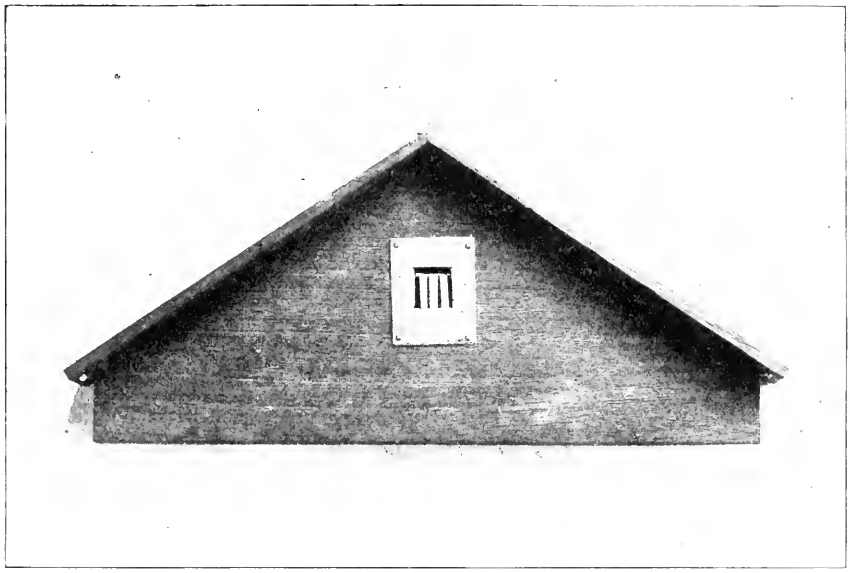
THE "BOWEN" SECTION FOLDER.

from myself, or Mr. E. J. Burtt, 21, Stroud Road, Gloucester.—A. H. Bowen.

THE WATTS ROOF ESCAPE AND VENTILATOR.

Most bee-keepers will have found a difficulty in providing ventilation in the roofs of their hives, together with a means of allowing any bees that may become imprisoned under the roof to escape, the difficulty being to prevent robbers using the passage to get inside, especially when feeding is in progress or supers are being cleared. The cone escape is not satisfactory, as bees will in time find their way in through the hole at the apex, even if two are used, one inside the ventilation hole and the other outside. A spring escape soon gets out of order and does not improve the appearance of the hive. Mr. Watts has come to the rescue with a device on somewhat similar lines to his well-known escape, and which he exhibited at the annual meeting of the B.B.K.A. As will be seen by the illus-

tration, it is very simple and neat, consisting of three strips of aluminium bee will easily force its way out from the inside, but it is absolutely impossible for



MR. WATTS' ROOF ESCAPE AND VENTILATOR.

hinged at the top of a square aperture and swinging outwards at the bottom. A it to return. Ventilation is secured by the slits between the aluminium strips.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

FAIR (Dover).—We cannot trace any bees having been received from you, so your package must have miscarried somewhere. The casting out of larvæ and young bees generally points to a shortage of food. From the symptoms you describe we are afraid that "Isle of Wight" disease has something to do with it. From that or some other cause it is probable that the bees have dwindled until they have been too few in numbers to keep all the brood warm, and during the frosty nights some of it has become chilled.

H. J. H. (Winchester).—(1) Yes. (2) It is rather early, but would be all right if you are certain there will be drones to mate with the young queens. (3) Leave it open during the summer and close in winter. (4) Candy should only be given during the winter and up to about the end of March. Give syrup now, and store the candy in a cool dry place; if well made it will keep moist, but should it become too dry and hard it may be melted down into syrup.

H. A. WELCH (Nantwich).—Your query is rather vague. If you place the shallow combs in position without a queen excluder between them and the lower combs, you may divide them as you suggest when there is brood in both sets of combs. We should prefer to use standard frames and foundation instead of shallow frames. The queenless colony would rear a queen, but you would save time by purchasing one. Use a cage to introduce her.

W. COUPAR (Cockermouth).—We did not receive any report of a cure. There is no cure up to the present, but some

of the "remedies" advertised may, to a certain extent, act as preventives.

Suspected Disease.

J. D. (Dover).—The bees are suffering from "Isle of Wight" disease. Your best plan is to destroy them.

E. J. (Barnt Green), "Gyp" (Midlothian).—It is "Isle of Wight" disease.

C. S. Kusel (Liverpool), "Was" (Co. Meath).—We do not find disease in the bees sent.

A. H. B. (Lincs.).—"Isle of Wight" disease. It depends on the size of the skep. There should be from 2 to 3 lbs. of bees.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½in., *or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS.

OWNER, deceased; quantity drawn out shallow frames, sound, healthy, 5s. doz.; twelve section racks new, quite complete, 4s. each; 12 new shallow frames, rack foundation, wired, all complete, 4s. 6d. each.—EXPERT, "B.B.J.," 23, Bedford-street, Strand.

SECONDHAND binocular microscope, in mahogany case, by Beck, rack focusing, 2 pairs of eye-pieces, 1in. and 2in. objectives, stand condenser, mechanical stage, &c. What offers?—COOMBES, 87, Fore-street, Devonport, Devon.

WANTED, stock of Sladen's British Goldens, in standard frames, without hive; approval. —Write, stating price, &c., to BEN CASTLOW, 72, Nicholson-street, Portrack Lane, Stockton-on-Tees. v 82

FOR SALE, 30 lbs. of pure honey, in frames; also 3 bar frame hives, 6s. each; strong and well made.—30B, Earlsfield-road, S.W. v 81

TWO ladies desire board-residence at apiary where instruction in bee-keeping would be given; Surrey or Sussex preferred.—Full particulars to A. O., 17, Durham-avenue, Bromley, Kent. v 79

FOR SALE, 2 splendid stocks of bees on 10 frames each, 25s. each.—KNIGHT, Kenwyn, Truro. v 78

SEVERAL strong healthy stocks for sale, on 10 wired frames, disease free, in W.B.C. or standard sound hives, packed on rails, 45s. complete.—CHARLES DRAKE, Cleveland House Apiary, Chatteris. v 80

FEW 10-frame standard hives, sound and recent, without fittings, take 2 racks, temporarily used, no disease, 4s. each, 45s. doz.; 3 skeps bees, 12s. 6d. each; 4 gross unused W.B.C. ends (ordinary), 5s.—Particulars, MASON, Poplars, Moorend, Stony Stratford. v 86

EXCHANGE, pure bred chickens, day old, for honey or bees.—BECK, Airton, Leeds. v 64

3 NEW bar frame hives, 6 ditto, nearly new, 10 frames each, lift, and W.B.C. ends, 5s. and 4s. 6d. each.—WEBB, Gordon-road, Swindon. v 87

A FEW swarms, healthy, in straw skeps, May, 17s. 6d.; June, 15s.; 2s. 6d. allowed for skeps when returned immediately; deposit.—DR. WHITESIDE, Kilham, Driffield. v 85

WANTED, good ripener, extractor, travelling crates, honey receptacles; cash, or exchange camera.—CLEGG, Old Newton, Stowmarket. v 84

WANTED, a few early Dutch swarms. H. A. COLLINS, Mylington, Exning, Newmarket. v 83

FOR SALE, 50 stocks of bees without hives; many just imported from the Island of Jersey, where disease is unknown.—Particulars from Managers, BRITISH BEE JOURNAL.

FOR SALE, the property of an officer now in France, stocks of bees, with hives.—Price and particulars to SERVICE, "B.B.J." Office, 23, Bedford street, Strand, W.C.

BEES; old English stocks, on standard combs, wired, guaranteed healthy; price 30s. each.—F. A. BEAN, Snaith, Yorkshire. v 44

FOR SALE, stocks of English blacks, on standard frames, healthy and in splendid condition; open to expert inspection.—EDWARD BAKER, Pickering, Yorks. v 49

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, first grade sections, 7s. per dozen, free on rail.—NELSON, Paradise-cottage, Appleby. v 48

20 GOOD stocks bees in good wood hives, 25s. each; approval; deposit.—F. HARRISON, Poultry Farm, Pickering. v 50

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, cloth bound copy "Bee-Keepers' Record," Vol. 7, year 1889.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a complete comb of both a bad and mild case of Foul Brood.—HERROD, "B.B.J." Office.

SWARMS, healthy, from W.B.C. hives, for sale, May, 15s.; June, 12s. 6d.; boxes returnable. —RIDER, Sandon-road, Leek. v 75

HAVING obtained a larger one, will sell small treadle grindstone, 10s.; also 12in. lawnmower; both in excellent condition.—HERROD-HEMPSALL, Apiary, Luton, Beds.

BELGIAN RELIEF FUND.

We have at our office a 28lb. tin of Welsh heather honey, a hockey stick, three bound volumes of "Record," and an Irish Bee Guide to sell for the above fund. What offers, please, to Manager, British Bee Journal Office, 23, Bedford Street, Strand, W.C.?

LINCS. B.K.A.

We are asked to announce that a committee meeting of the above association will be held at the Coffee Palace, Lincoln, on Saturday, May 8th, at 3 p.m.

NOTICES.

We are reluctantly compelled to advance the price of Apicure. The stock we held has carried us so far at the usual price, but on replenishing we find that the cost of the ingredients used in its manufacture has increased owing to the war, several being double their usual price. After Saturday, May 16th, therefore, the prices will be 1s. 8d., 2s. 10d., and 5s. 8d. per tin.

In the notice of the new roof escape, on page 145, we should have stated the inventor is Mr. F. W. Watts, 47, Hillcourt Road, Dulwich.

THE B.B.K.A. CONVERSAZIONE, MARCH 18TH.

LECTURE BY MR. G. HAYES, BEESTON, ON "THE SEPARATION, EXAMINATION AND PHOTOGRAPHING OF POLLEN GRAINS FROM HONEY."

(*Continued from p.* 138.)

With regard to the plates and focusing screen, be careful that you get the screen right with your dark slide; that is, the plate should register exactly with the focusing screen. The smallest conceivable distance will put the thing out. As regards plates to use. I recommend the Wellington anti-screen, because I use them, although there are doubtless other makes equally as good. Then as to exposure. You will have to test for this as conditions of light, colour, &c., have to be allowed for. I can tell you what it was for the three slides shown: 2 minutes for the 1in. objective (Figs. 5 and 6), for the $\frac{1}{2}$in. (Fig. 7) 4 minutes, and for the $\frac{1}{4}$in. (Fig. 8) 10 minutes, with incandescent gas mantle. Of course, the higher power you get the more exposure you require, because less light can get through. An extension of the camera will also increase the time of exposure. As regards development of the exposed plates, this is purely a photographic process, and it is only necessary to follow out the formula given on the box of plates.

Now, by these means you will be able to have a record of the pollen grains as they lie in the plane of observation on your microscope slide, but you may have noticed that photographs of pollen grains do not always give a clear impression of their complete form, and you will see why that is so. The reason is because you can photograph the pollen grain in its outline form only, and not in its complete form. You can only see one part at a time, that is at one level, and you may get ten different levels in the depth of a pollen grain with a $\frac{1}{4}$in. objective. Besides this, it is often necessary to roll the grain about to see it at varying angles before you can get a true conception of its form and markings. A photograph can only give you one of these things at a time.

There is, however, another way of recording its form, and that is by drawing it. One means of doing this is by a "Camera Lucida," see Fig. 12, in which are several types. Whichever is used the result is the same. The way to use one of these is to fix it on the eyepiece of

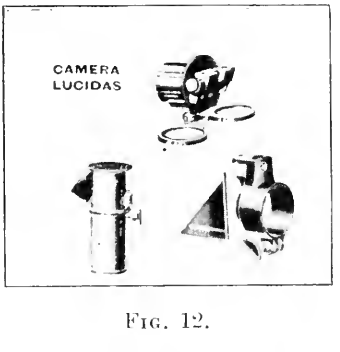


FIG. 12.

your microscope—they are made for this purpose—then put your microscope in the horizontal position and raise it from the table the length of the tube. Place a sheet of drawing paper on the table, and, standing in front of the eyepiece, arrange your light and focus; now stand over the lucida and look *through* the tinted reflector, or prism, whichever it may be, and you will see the enlarged image on the paper. If both eyes are kept open one will see the image through the lucida whilst the other will see the pencil point and so enable you to trace the image on the paper. In this you will at first find

a difficulty, but practice will soon overcome it. Here again we have about the same disadvantage as in photography, and for these reasons I prefer to make a drawing direct as I see it bit by bit; you can go over it again and again, note in any detail you may have missed, and so get the whole general form and depict it as you would that of an apple placed in front of you for the purpose, and this it was that convinced me that drawings would be better than photos to illustrate my articles on "Nectar-Producing Plants and Their Pollen." As pollen grains in water cannot be examined in this position I prefer to draw them direct from the microscope with the eye. To do this I take a piece of paper and sketch the pollen grains bit by bit, looking at them from different angles and depths until I get the whole thing embodied in my brain and transferred to the paper. By a drawing made in this way you get a truer representation of the pollen grains than by photographing.

We must, of course, study the form of pollen grains. We require to know what form a pollen grain takes from a certain plant, and fix it in our mind to be able to tell at a glance whence it came, and study the general form.

Some slides were next shown to illustrate the difference between a photo and a drawing of a pollen grain. A few of the various pollen grains which showed their different forms under differing conditions.

In addition to the foregoing photos of the separated pollen, grains from five different samples of foreign honey were put on the screen. These are shown in Figs. 13, 14, 15, 16, and 17.

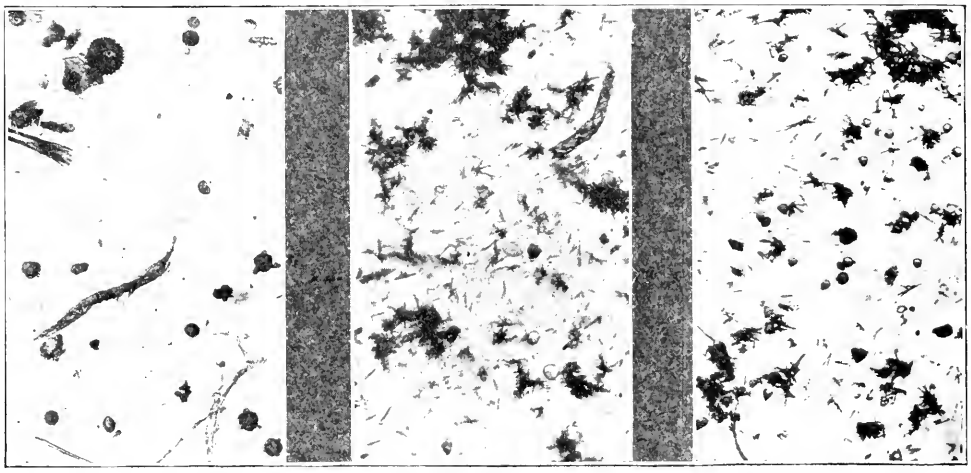


FIG. 13.
S. AUSTRALIAN.

FIG. 14.
CALIFORNIAN.

FIG. 15.
ORANGE FLOWER.

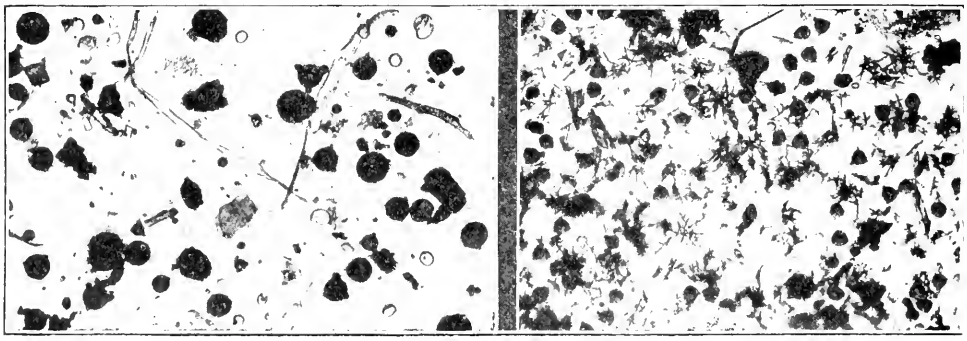


FIG. 16.
JAMAICAN.

FIG. 17
CHILIAN.

(To be continued.)

DYNAMIC EVOLUTION AND QUEEN-REARING.

(*Continued from p.* 141.)

Vigour, of course, will always be secured by the fact that the sire of every queen is never more than a few weeks old; and this, as I have before suggested, would probably be increased by the higher chances of such sire being himself the son of a young queen. Therefore, it seems to me that we may quite safely leave to Nature the care of the vigour of the race. Again, by being careful to breed from two-year-old queens before queen-cells are started preparatory to swarming, we ought to tend to secure the desired elimination of the swarming impulse; or, I imagine, the same result ought to be attainable by breeding from a queen that has quite lost all impulse in that direction—that is, a queen that has only recently swarmed. But the first desideratum mentioned above (the more rapid "fixing" of a quality) cannot be secured by breeding from two-year-olds—we must make up our minds to that.

Whether, however, our breeders do or do not breed from yearlings, it is quite certain that a number of amateurs introduce young queens to their hives at the end of every season; and this fact alone might very easily have an influence on the race in general. It necessarily happens that *some* yearling queens swarm, and there are probably others that meet with an accident and are superseded; and therefore, in a district where all the hives are headed by yearlings, all queens that are reared naturally must be the daughters of yearlings; and as these will infallibly mate with the sons of yearlings, if there is anything whatever in the theory of dynamic evolution, the tendency would be to equalise the desired forms of energy among both sexes, and thus fail to concentrate them so fully in the females. Naturally, this system of yearly requeening has not been long enough in vogue to have made any appreciable impression on the race; but it would be interesting to see whether a couple of centuries of it might not, perhaps, have the result of causing drone-qualities (laziness and greed) to be observable among workers to some extent.

The question now arises whether a two-year-old queen is as fertile as a yearling. One of our great breeders asserts positively that she is not. "Swarthmore," however, who certainly ranked among the greatest American breeders, has recorded that he owned a *three*-year-old queen whose fertility was as great as that of the best of her younger rivals. It seems, then, that breeders might do some useful work by trying to arrive at a decision between these two authorities. I cannot help thinking that, although a two-year-old might begin to fail in July, she might well be at her maximum potential in June; in which case the dynamic theory would demand that we breed from her in June. On the other hand, if a two-year-old queen does begin to fail before the honey-flow, the same theory would demand that we do *not* breed from her; but at the same time it would require that a yearling be bred from towards the end of the honey-flow, *and not earlier*. At any rate, if dynamic evolution be true, it is certain that we cannot achieve complete success unless we apply the factor of age somewhere.

And this leads us to another consideration. If we may judge by breeders' advertisements, there must be a large number of queens reared at an unnaturally early date in the spring—and, indeed, the books tell us that, by doing this, we can make certain of the drone parentage. No doubt the advantages of such a practice are definitely procurable, while Mr. Redfield's theories are still no more than theories; but it cannot be overlooked that the practice is contrary to the principles of dynamic evolution, which lays it down that a queen should be bred from only after she has developed her highest potentiality after the winter rest and has continued for some time at that highest potentiality.

It is possible that the foregoing observations may have the effect of deterring many bee-keepers from requeening annually—in which case I think they would be foolish. There is, I suppose, little doubt that a yearling queen does give the best honey-return; and, after all, honey is the be-all and end-all of apiculture. But even if Mr. Redfield's theories be absolutely true, one could still quite safely employ only yearling queens, provided that one destroys, before the end of the season, any queen that has been raised in that season from a yearling mother, as the result of the issue of a swarm or otherwise. Meanwhile, might it not be as well if our professional breeders were to test Mr. Redfield's conclusions? As a beginning, I would suggest the propriety of breeding a line of queens from *three*-year-olds (say five or six generations), and then introduce them to a district where "Isle of Wight" disease is prevalent. Even if the experiment yielded no observable results, it would not have been an expensive matter. And during the course of this experiment I should be inclined to make use of any artificial "remedy" that is likely to hold the disease in abeyance; for, even though it may be useless as a permanent "cure,"

it would be somewhat disheartening, after rearing perhaps three generations of one line, to have them exterminated and need to begin all over again.—H. CAMPBELL.

SHOULD WE ENCOURAGE BEGINNERS?

It is sometimes amusing to notice the widely divergent views held by the members of a coterie of bee-keepers on this point. The selfish opinions held and loudly expressed by many of the extensive bee-keepers would lead one to think that they held a monopoly of honey getting and honey selling, and that they considered all would-be entrants into the craft as interlopers stepping in where they had no right to be. The small bee-keeper, unless he is steeped in inborn selfishness, rarely takes this narrow view of the matter; he too often errs in going to the other extreme—he would have all men and women enthused into being practisers of apiculture. Those badly smitten with the "bee fever," often an ephemeral taint, talk of bees and bee-keeping in and out of season. Thoughts of the hobby are with them at work and at leisure, and they even dream of bees in the silent watches of the night. Such men, not content with themselves becoming obsessed with the subject, would like to convert all mankind and womankind. Both extremes are to be eschewed. The golden mean, as is so often the case, is not only the line of least resistance, but the safe road on which to travel. I have always advocated and practised moderately toned advice favouring regular accretions to the ranks. For countless reasons so many steadily drop out yearly that recruits are always welcome, provided they are of the right sort. Bee-keeping, like every other pursuit worth practising, has its lights and shadows. Anyone who conceals the shadows is not playing the game when dealing with beginners. Indeed, he is doing an injury not only to the party he advises, but to the industry as a whole. This is the besetting sin with many who lecture on bee-keeping. They magnify the molehill into a mountain when dealing with the light and keep the shadows in the background.

Stopping Robbing.—A friend some time ago sent me the following device he has invented to cure robbing. He places a Porter escape in front of the entrance in such a way that the bees can get in freely, but cannot get out again. They are fairly trapped inside, where, after some time spent in worrying to get out, they accommodate themselves to circumstances and become regular members of the bee community. It might be expected that the two forces would be antagonistic, and a battle royal result, but when it is remembered that the attacked stock is almost certain to be weak and imbued with little energy or fighting instinct, and that both lots are saturated, so to speak, with the same honey odour, it is no great marvel that a peaceful combination results. In the special case under consideration the raiding bees came from somewhere outside the home apiary, therefore the bee-keeper saved his full number, acquired a strong stock, and kept his other hives from attack. Had he temporarily closed the entrance the marauders would have carried on their depredations on neighbouring hives, and ultimately possibly upset the whole apiary. I remember some years ago recording an American plan whereby robber bees were tempted by "feed" into an empty hive and there trapped, after which they were destroyed by fire. The above is a far more commendable plan. Theoretically, it should prove serviceable and efficient.

Clustering at Entrance.—In ninety-nine cases out of the hundred, when bees cluster at the entrance or darken the flight-board unduly there is something wrong with the interior, and even in the hundredth case there is something wrong somewhere which should be righted.

Overcrowding is generally the chief cause tending to clustering, and, of course, the bee-keeper has the cure in his own hands. He can at any time of the day slip in one, two, or more frames, thus giving room for the queen's labours and space for storing the honey being rapidly carried. Generally, some comb-building aids both queen and workers to remedy the wrong. Too small a brood area brings about congestion, and a high temperature makes the interior intolerable for the crowd. A reduction of the oppressive heat by ventilation soothes and comforts the busy denizens of the hive. Too small an entrance is a common cause for clustering, and is easily remedied by easing out the slides, or in extreme cases it may be well to raise the hive front clear of the floor-board. Neglect of placing supers on the hive brings about discomfort and clustering. A case of sections or a set of shallow frames acts as a rapid cure. A hive out in the open at times produces this waste of the bees' energies. Shade can be temporarily supplied, and a good strong spray of water through a hose

cools the whole interior as well as the exterior. Don't have the hive top too dark a colour. Pure white or a light grey suits best. Even with ample interior space clustering may take place under the following circumstances. A considerable congestion of brood in frames, or a complete congestion of honey in all frames owing to an unexpected flow. In either case the workers and queen are compulsorily made to strike work. The bees loiter about and cause a ferment, with a consequent rise of temperature. Again, the bee-keeper can right the wrong by taking out congested frames and replacing them by frames with wired-in foundation.

"*A Kink.*"—The plan is not my own, and I don't quite remember where I saw it recorded. One has often some trouble in scratching matches when lighting a smoker. Rub some rather thick paint on a corner of the wood of the bellows. Sprinkle on this some medium fine sand, which, when dry, will prove a very efficient lighter. Shape and size might be much like what is found on an ordinary match-box, and it proves as convenient and efficient.

EARLY SWARMS.

Although the season is late, and the spring has on the whole been cold, we have already received the following reports of swarms. The colonies must have been strong, and no doubt the warm genial weather experienced for a few days last week has caused these early swarms:—

It may interest readers of the "BEE JOURNAL" to hear that on April 27th I had a fine swarm, although in this district I believe that swarming is generally late. The stock from which it issued have wintered on eight frames.—Yours faithfully,

E. M. K.

It may interest your readers to hear that I had a fine swarm on Sunday, May 2nd.

J. SMALLWOOD.

Although we have had a very cold and late spring in the Vale of Evesham the bees have started swarming. On Wednesday, April 28th, four came off, and on Thursday three more belonging to different people. Two swarms decamped to pastures new; one swarm I was sent for to hive, but when I arrived it had flown away. On making enquiries next day I was told that it had gone to the next village—about two miles distant—and settled on a horse's head. The horse started kicking, and smashed the shafts of the cart, besides doing other damage.

W. J. WOOLLEY.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 29th to July 3rd, at Nottingham.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretaries, 23, Bedford Street, Strand, W.C. **Entries close May 31st.**

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	26	13	0

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

R. JACK (Glasgow).—*Moisture in Hive.*—The condition is not due to the hive letting in wet. It is moisture given off by the respiration of the bees, which has condensed on the hive sides.

H. P. MARSH (Torquay).—*Preventing Swarming.*—Cutting out queen cells alone will not prevent swarming, as the bees will probably commence others at once. After cutting them out give the bees more room, either by extra supers or taking out one or two brood frames and replacing with new sheets of foundation, the combs of brood being utilised to strengthen weak colonies, or to form nuclei. Give the bees room rather in advance of their requirements, and thus prevent them being overcrowded and commencing queen cells. Once they do this it is often difficult to prevent swarming. Read the chapter on "Preventing of Swarming" in the Guide Book.

J. R. P. (Twickenham).—(1) No bees are immune, but Dutch bees appear to resist the disease better than other races; (2) keep Naphthaline and Apicure in the hives, and medicate the food with quinine, or one of the other advertised remedies; (3) they may be cleaned with a solution of Fel's Naptha Soap.

R. C. Kerr (Ross-shire).—The bee is a worker which has gone into the cell immediately after its vacation by the young queen. The lid of the cell, still hinged, has then swung, or more probably been accidentally pushed into position again, and been fastened by the bees. It is not at all an unusual occurrence for a worker to be imprisoned in this way.

Suspected Disease.

F. Smart (Bristol).—(1) "Isle of Wight" disease; (2) it is quite good for human consumption; (3) destroy them. You might melt them down for wax for domestic use; (4) yes, there are probably more bees in the district than you are aware of.

"Goats" (Stourbridge).—It is "Isle of Wight" disease.

Doubtful (Syde).—There are symptoms of "Isle of Wight" disease. If you notice any "crawlers" send us a few of them, and tell us any other symptoms you may notice.

A. Hignett (Bath).—The bees were too dry for diagnosis; the trouble was probably "Isle of Wight" disease. Scorch the hive with a painter's lamp, or wash out with a solution of carbolic acid one part, water two parts, or a strong solution of Izal and water, then expose the hive to the air until the smell has disappeared.

A. H. (Welshpool).—The bees were too dry for diagnosis, but from the symptoms you describe there is no doubt the trouble was "Isle of Wight" disease. It will be better to wait at least one season before making a fresh start. No precautions that one may take seem to keep the disease away. Many of the most careful and up-to-date bee-keepers in the country have suffered.

"Anxious" (Edinboro').—There is no disease in the bees sent.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade ***advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as "Business" Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.***

PRIVATE ADVERTISEMENTS.

OWNER, deceased; quantity drawn out shallow frames, sound, healthy, 5s. doz.; twelve section racks new, quite complete, 4s. each; 12 new shallow frames, rack foundation, wired, all complete, 4s. 6d. each.—EXPERT, "B.B.J.," 23, Bedford-street, Strand.

FOR SALE, the whole of appliances of up to date apiary (no bees), comprising 50 carpenter-made substantial hives, mostly 1in. material, 500 clean brood combs, 100 shallow frame supers, with clean combs, Cowan reversible extractor, honey refiners, excluders, clearers, foundation knives, tools, and large quantity of sundries; also extracting house, double lined, with floor and substantial bench; situate in Wiltshire; will be sold for best offer as owner has left district.—Apply, WM. DAVIES, Shepston-on-Stour, Worcestershire.

FOR SALE, 3 nucleus on 4 frames each, healthy, 12s. each.—KNIGHT, Kenwyn, Truro. v 1

FOR SALE, 15 stocks of English blacks on 8 frames, plenty stores, healthy.—For price, &c., apply R. METCALFE, Ebberston, Snainton, S.O., Yorks. v 2

SWARMS, four, guaranteed healthy, May 3s. 3d., June 2s. 9d. 1b.—ANDREWS, Rock-road, Peterborough. v 3

SAW bench, iron frame, 20s.; six supers, 5s. 6d.—GREEN, Buildings, Calverton, Notts. v 4

FOR SALE, 4 14lb. tins light Cornish honey, 7d. lb., cash with order, sample 3d.—HAWKEY, Trewithin, St. Wenn, Bodmin, Cornwall. v 5

4½ CWT. light Cambridgeshire honey, in 28lb. tins, highest offer accepted.—BARNES, Burwell, Cambs. v 6

FOR SALE, splendid granulated honey, in 14lb. tins, 6½d. per lb.—BURGESS, Newport Pagnell, Bucks. v 8

COUNTRY apiary, not had "Isle of Wight" disease, stocks healthy bees, on wired Standard frames, in travelling boxes, no hives, 25s. per stock, carriage forward.—PARSONS, London Joint Stock Bank, 52, Witham, Hull. v 57

FOR SALE, several stocks in good frame hives.—For all particulars, write APIARY, Scalby, Scarborough. v 9

BEES, 2 stocks on 9 S. bars, £2, boxes free.—ROSS, Glorat, Milton of Campsie, N.B. v 10

GUARANTEED healthy natural swarms, May, 3s. 6d. lb.—CHAPMAN, Chelston Cottage, Bodmin. v 12

FOR SALE, 3 skeps bees.—WILKINSON, Burtergill, Warcop, Westmorland. v 13

FOR SALE, few early Dutch swarms, also hybrids; a few good Buff Orpington ducks and drake.—CHEESMUR, Forest Cottage, Worth, Sussex. v 15

THE SIZE OF THE JOURNAL.

From this issue onwards we hope to continue the "B.B.J." at its full size every week. During the early months of the war we, in common with other papers, had a somewhat anxious and trying time, as we have not only the JOURNAL to issue weekly, but the RECORD each month as well, and while there is a certain amount of anxiety connected with the latter it is not to be compared to that of a weekly issue, as we know from our experience of *both*. The JOURNAL is very much appreciated, both for the useful information and help we are able to give our readers and for its inestimable value as an advertising medium. That the advantages offered by our prepaid advertisement columns are well known, the increasing number of advertisers proves.

We most heartily thank all those who have in any way given us their support in the past, especially during the last nine months, and confidently rely on their help in the future.

THE ROYAL SHOW.

Those bee-keepers intending to exhibit at the Royal Show at Nottingham must note that entries close on May 31st. Applications for schedules should be made, and entries sent in as early as possible, to the Secretaries, B.B.K.A. Office, 23, Bedford Street, Strand, W.C. We trust that our readers and bee-keepers generally will do their best to make the "Hives and Honey Department at the premier show of the country a success by sending in a record number of entries, and thus hearten and encourage the B.B.K.A. in undertaking to keep up their department at the show this year.

Do not forget there is the W.B.C. Memorial Gold Medal, and that Colonel T. H. Jolly has again offered a W.B.C. hive to be competed for.

NOTICE.

We are reluctantly compelled to advance the price of Apicure. The stock we held has carried us so far at the usual price, but on replenishing we find that the cost of the ingredients used in its manufacture has increased owing to the war, several being double their usual price. After Saturday, May 16th, therefore, the prices will be 1s. 8d., 2s. 10d., and 5s. 8d. per tin.

BELGIAN RELIEF FUND.

We have at our office a 28lb. tin of Welsh heather honey, a hockey stick, three bound volumes of "Record," and an Irish Bee Guide to sell for the above fund. What offers, please, to Manager, British Bee Journal Office, 23, Bedford Street, Strand, W.C.?

THE B.B.K.A. CONVERSAZIONE, MARCH 18TH.

LECTURE BY MR. G. HAYES, BEESTON, ON "THE SEPARATION, EXAMINATION AND PHOTOGRAPHING OF POLLEN GRAINS FROM HONEY."

(*Continued from p.* 148.)

The greater number of the pollen grains in the Californian honey are eucalyptus, while most of the those in the orange flower are white clover; in fact, it is English honey sold under that name. Pollen grains are also present in beeswax and are largely responsible for its colour. In addition to pollen grains we have other substances in honey. Most of the other dark markings you noticed in the last slides are lime crystals in various forms, bits of the anthers of flowers, and even sometimes scales from the wings of moths or butterflies, but we have plenty to entertain us in the pollen grains alone. I hope that I have interested you, and also that what I have said may be profitable to some of you. I fancy if you will take up this subject you will never regret it. I thank you for your patience, and if there is any point on which I have not made myself clear I shall be willing to do so if I am able, as far as time permits.

MR. REID: I myself should like to ask a great number of questions. We will devote as much time to discussion as Mr. Hayes will allow us. The lecture has been extremely interesting, and we shall be very pleased indeed if anyone will like to ask any questions or make any remarks.

COLONEL WALKER: I will begin by saying I have seldom listened to a lecture so modestly or so clearly given. It is evident considerable skill is required to be quite sure one's observations are correct. I have been wondering if we can always be so certain of the source of the honey by examining it for pollen grains. A bee may visit a flower that will yield only pollen, and the next flower it visits may be a different kind, and from this it may obtain nectar only. The anthers may not be in the condition to shed pollen, or it may be a variety which bears the male and female flowers on different plants, but when the bee returns to the hive to deposit its load of honey and pollen some

grains of the latter will probably become mixed with the former. If that honey was then examined it would appear from the pollen grains it contained that it was from quite a different source to that from which it was obtained. I am not sure I have expressed myself quite clearly, but I think you will understand my meaning.

MR. HAYES: Of course, it is, as has been said, possible for one of those things to come about, but I can hardly conceive that any flower that is yielding nectar would not at the same time yield pollen.

MR. LAMB: Referring to Colonel Walker's remarks about bees not keeping to the same class of flowers in gathering nectar, I have found that they will fly for yards to visit the same kind of flower they have just left, and it is exceptional for them to visit more than one class on one journey.

MR. HAYES: I might say from my own observation of the visiting of flowers by bees, that when a flower is yielding nectar abundantly they will visit only that one kind of flower, but on the other hand when flowers are scarce, as in the early spring and in the autumn, they are glad to get nectar where they can, and will then visit almost any kind of flower indiscriminately.

MR. FRANKENSTEIN: Bees have cells for honey and cells for pollen, and generally keep strictly to the rule.

MR. J. HERROD-HEMPSALL: The matter of being able to determine the source of honey is of great importance to bee-keepers, not only with regard to its purity but also to determine whether honey is English or foreign, as so much foreign honey is now being sold as English. I noticed in the slides of foreign honey there were a much larger number of what Mr. Hayes described as lime crystals than there were in those shown of English honey. I would like to ask him if he finds that this is the rule; if so, that also might be a factor in determining the country of origin of the honey.

MR. HAYES: Certainly I have not found anything like the number in English honey that you see in foreign honey, but I would point out that the honey from which these samples were taken had been standing for some time, and there are probably more of the crystals than would have been found when the honey was new.

MR. BOCOCK: I notice that the white clover pollen grains that you have described as being photographed in a "dry" condition are of an identical morphology with those that are obtained from the ventricles of the bee at this period of the year, when not only have they undergone a prolonged soaking in honey, but have also been subjected to the action of the bee's gastric juice. Can you give any explanation of this coincidence? The pollen grains would hardly revert to their original shape under the action of the enzymes of the bee's stomach.

MR. HAYES: Once the pollen grains have changed they will not revert to their original form. After passing through the digestive tract of the bee they would be more or less broken up. Might I say you find many pollen grains very much like the white clover. That seems to be the most common form when in the dry state. It is at times very difficult to tell one from another when they are in that condition. It is in the after-developments, when the grains have been immersed in honey, &c., that you are able to distinguish them.

MR. LAMB: I have been wondering whether we may hope to have Mr. Hayes' articles published in book form.

MR. REID: I must say how very clear and concise Mr. Hayes' remarks have been. I have learned a great deal from his lecture, and I hope it will be repeated in his book. I propose we give him a most hearty vote of thanks.

MR. HAYES: I thank you most heartily for your appreciation. What I have attempted to do has been to give you some information, and I am therefore especially gratified to hear that the Chairman has been able to learn something.

Before and after the lecture articles of interest were exhibited. A most comprehensive collection of exhibits appertaining to honey and wax was that shown by the Rev. F. S. F. Jannings, who had evidently scoured a good portion of the world for specimens. They included the following:

SAMPLES OF WAXES.

English Bees Wax.
Moulded cone shape for waxing thread.
Japanese Vegetable Wax.
Carnauba Wax.
Chinese Yellow Insect Wax.
Chinese White Insect Wax.
Myrtle Tree Wax. Cape of Good Hope.
Myrtle Tree Wax. Do. Commercial.
Myrtle Tree Berries.
White Ozokerit.
Ceresin, Light Yellow.
Ceresin, Dark Yellow.
Paraffin Wax. Scotch Pack (hard).
Paraffin Wax (soft).
Spermaceti (refined).
California Bees Wax.
Abyssinian Bees Wax.
Morocco Bees Wax.
Mozambique Bees Wax.
Senegal Bees Wax.

Benguela Bees Wax.
Maple Wax.
Samples of Kaolin, Sulphate of Baryta, Turmeric.

SAMPLES OF HONEYS.

Orange Blossom from U.S.
Basswood from U.S.
Basswood from Canada.
Sage from U.S.
Alfalfa from U.S
Boxwood Honey from Queensland.
Honey from India.
Pure Acacia Honey, Hungarian.
South Australian Honey.
Prize Honey (Melbourne, Australia)
Honey Dew.

SAMPLES OF

Pure Glucose.
Commercial Glucose.
Levulose.
Raw Beet Sugar from West Indies.
Cube Beet Sugar, Belgium.
Molascuit, West Indies.
Sugar, Antigua.
Pure Cane Sugar, Lump and Crystals.
Maple Syrup.
Maple Molasses from Canada.
Maple Sugar from Canada.

Mr. F. H. Watts, of East Dulwich, showed one of his new hive roof escapes, a short account of which we gave in our issue of April 29th. Mr. Reid also showed a cork quilt. This was about $\frac{5}{8}$ inch thick, made of ground cork. Mr. Reid explained that the usual process of making ground cork slabs made it unsuitable for bee-keepers, owing to the medium used to bind the cork. After some experiments he had succeeded in finding something that was suitable. The cost of a slab large enough to cover ten frames would be about 2s. 6d.

This brought to a conclusion one of the most interesting and enjoyable meetings that have been held for some time.

THE HISTORY OF THE HONEY GUIDE OR CUCULUS INDICATOR.*

(From "London Review," September, 1777. Philosophical Transactions of the Royal Society of London for the year 1777.)

Article 5. Is the relation of a journey into Africa, from the Cape of Good Hope, by Dr. Andreas Sparrman, of Stockholm, from which we shall select an account of a curious bird, whose instinets lead it to the detection of the wild-bees' hives, whose honey, however, it is of itself incapable to plunder.

"This curious species of cuckow is found at a considerable distance from the Cape of Good Hope, in the interior parts of Africa, being entirely unknown at that settlement. The first place where I heard of it was in a wood, called the Groot Vaader's Bosch, the Grand Father's wood, situated in a desert near the river, which the Hottentots call T'kaut'kai. The Dutch settlers thereabouts have given this bird the name of Honig-wyzer, or honey-guide, from its quality of discovering wild honey to travellers. Its colour has nothing striking or beautiful, as will appear from the description and drawing annexed; and its size is considerably smaller than that of our cuckow in Europe; but in return, the instinct which prompts it to seek its food in a singular manner, is truly admirable. Not only the Dutch and Hottentots, but likewise a species of quadruped, which the Dutch name a ratel†, are frequently conducted to wild bee-hives by this bird, which, as it were, pilots them to the very spot.

"The honey being its favourite food, its own interests prompt it to be instrumental in robbing the hive, as some scraps are commonly left for its support. The morning and evening are its times of feeding, and it is then heard calling in a shrill tone 'eberr, eberr,' which the honey-hunters carefully attend to as the summons to the chase. From time to time they answer with a soft whistle, which, the bird hearing, always continues its note. As soon as they are in sight of each other the bird gradually flutters towards the place where the hive is situated, continually repeating its former call of 'eberr, eberr'; nay, if it should happen to have gained a considerable way before the men (who may easily be hindered in the pursuit by bushes, rivers, and the like), it returns to them again, and redoubles its note, as if to reproach them with their inactivity. At last the bird is observed to hover for a few moments over a certain spot, and then silently retiring to a neighbouring bush or other resting-place, the hunters are sure of finding the bees' nest in that identical spot, whether it be in a tree, or in the crevice of a rock, or (as is most commonly the case) in the earth. Whilst the hunters are busy in taking the honey the bird is seen looking on attentively to what is going forward, and waiting for its share of the spoil. The bee-hunters never fail to leave a small portion for their conductor, but commonly take care not to leave so much as would satisfy its hunger. The bird's appetite being only whetted by this parsimony, it is obliged to commit a second treason, by discovering another bees' nest, in hopes of a better salary. It is further observed, that the nearer the bird approaches the hidden hive the more frequently it repeats its call, and seems more impatient.

"I have had frequent opportunities of seeing this bird, and have been witness of the destruction of several republics of bees, by means of its treachery. I had, however, but two opportunities of shooting it, which I did to the great indignation of my Hottentots. From those specimens (both of which are supposed to be females) I have made the subsequent description. The inhabitants in general accuse the same bird of sometimes conducting its followers where wild beasts and venomous serpents have their places of abode; this, however, I never had an opportunity of ascertaining myself; but am apt to believe such cases to be accidental, when dangerous animals happen to be in the neighbourhood of a bees' nest.

"Whilst I stayed in the interior parts of Africa a nest was shown to me, which some peasants assured me was the nest of a honey-guide. It was woven of slender filaments or fibres of bark, in the form of a bottle. The neck and opening hung downwards and a string in an arched shape was suspended across the opening, fastened by the two ends, perhaps for the bird to perch upon."

This account was written by Dr. Sparrman, of Stockholm. It is the earliest record of this interesting bird I have seen. The description and drawing referred to were not reproduced.—G. W. Judge.

* Honey guides are now recognised as a distinct group (family Indicatoridæ) and are not classified with the cuckoos. The genus referred to is probably that known as *Indicator Sparmanni*, the bird being described as "about 8in. in length, of an ashy brown colour above and whitish below, with a brownish shade on the throat."

† Probably a new species of badger.

BLURTS FROM A SCRATCHY PEN.

Really, I am getting quite out of patience with the cussedness of bees. Last year I attributed their predilection to swarming on Sunday, to piety, a desire to attend Church Service. Possibly they have resented this—are ashamed to be considered "goody, goody,"—for this year they served me a very shabby trick. Just at dinner time, when the good wife had called me (we dine at middle of day on Sundays), they took it into their heads to swarm. Now I wonder if they have anything up their sleeve against me? Hold hard! I shall have somebody "sitting on me" if I am not more careful about my anatomy and accuracy in my expressions. I may be told that the head of the bee is not the centre of bee wisdom, and that they have no sleeve. Well, I have not time in the present "blurt" to argue the former point, and, as for the latter, probably the equivalent is to say, Have they anything under their wing against me? Let it rest at that.

Some people are never satisfied. It might be said I was remarkably lucky to get a very strong swarm so early in the season. I am afraid that I am one of the never-satisfied. I was very glad of the swarm, but really think they were lacking in etiquette to come unannounced, especially as we had visitors that day. They should be more considerate.

But there were one or two details connected with that swarm which might prove interesting to brother bee-keepers. First, it has quite altered my views about that tin can and door-key accompaniment to swarming which we all know of. I had scorned that foolish idea. What had music (?) to do with swarming? But little things confound the wise, and my conceit was humiliated, and it happened thus:

My neighbour has a brother who has gone to the front, and, of course, his nephew, aged six, is simply mad on "khaki" and military pride of circumstance. For want of a better pair of cymbals he had commandeered the tops of two of his mother's saucepans, and was attempting his best imitation of "It's a long, long way to Tipperary" all round the garden and my apiary. Whether it was that these martial strains inspired the bees with a patriotic ardour to come out to fight, or whether it was that this music (?), which has been supposed for hundreds of centuries to have peculiar charms for them, had such a similar effect as a Scotchman feels when he hears the skirl of the bagpipes—whichever hypothesis is correct I don't know, but out they came in their bustling thousands. It seemed then the old story must be true.

But if this old story received confirmation, another old story received its *coup de grâce*. We have been told, ever since we suffered our first stinging lesson, that the prevention of swarming is to give plenty of room. Don't you believe it. If they have got the giddy fever you can no more prevent them carrying out their waywardness than you can prevent old Granny's hen from being broody. Here is an object lesson. The colony which had shown such wicked ways had originally been hived in a cheese box. Evidently the queen had been of marvellous fecundity, for a skep had been placed on the top of the cheese box. When I purchased them, for the convenience of railway transit I divorced the skep from the cheese box, and on arrival at home placed the latter on ten frames in a bar-frame hive. I gave them almost one and a half cubic feet of room underneath to play about in, and would you believe it, then they were not satisfied. What would

you have more? Even *then* they actually swarmed, and a big swarm, too. No, don't you tell me any more about plenty of room. It is all "kid."

You may be quite sure I shall particularly watch the vagaries of that American cheese box. I wonder what game it will play next?—J. SMALLWOOD.

HOMES OF THE HONEY BEE.

APIARIES OF OUR READERS.

MR. W. WATSON.

We cannot add anything to the interesting notes Mr. Watson sends, except to say that he has been very fortunate to have kept bees for fourteen years without having any disease at all. No doubt the care he takes with his hives and always having stocks headed by young vigorous queens have much to do with his immunity:—

I started bee-keeping in 1900 with a stray swarm, which alighted on the top of a house. I got it safely into a straw skep, and in the evening of the same day had it transferred into a frame hive, but, unfortunately, the bees were put in on the top of the frames instead of the usual way of allowing them to run in at the entrance. The result was that the queen and a great number of the bees got between the side of the hive and the division board and so were suffocated, and that was the end of the first lot.

Two years later a bee-keeping friend gave me a "cast" which did very well. A year later another bee-keeping friend gave me a frame of bees with queen and brood, and from that my apiary grew. I have eleven stocks, and up to the present they all have wintered well.

The district here is a very good one for flower honey, though I cannot say that I ever had very large "takes" from that source; the largest that I had would be three racks of sections, which, I think, is very good, as the climate in some seasons is very changeable, but my chief source is the heather, at which these last four seasons I have been able to take two and three racks of sections from each colony.

For the heather season I take my bees a distance of twenty-two miles by road, and I always look forward to it as the event of the season.

I have never had disease of any kind among my bees. I make all my own hives, and overhaul and thoroughly wash and paint them every year. All food given to the bees is medicated with Naphthol Beta. I re-queen each year, some before they go to the heather and others when they return.

The person seen on the right of the photograph is your humble servant, and the lady is my wife, who lends a helping hand in all the work of the apiary.

I have taken in your valuable "B.B.J." ever since I started bee-keeping: from it I get many helpful hints, and look forward to its coming each week.

Wishing all brother bee-keepers every success in the coming season, W. Watson, Meadowbank Cottage, Torrance-of-Campside, Scotland.

MR. W. WATSON'S APIARY.

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

QUEEN REARING AND INTRODUCTION.

(*Continued from page* 140.)

As already indicated, the best Queens are reared under natural swarming impulses. If from any cause the stock becomes Queenless under abnormal conditions, the bees become very excited, and for a time rush about in a frantic manner seeking for the

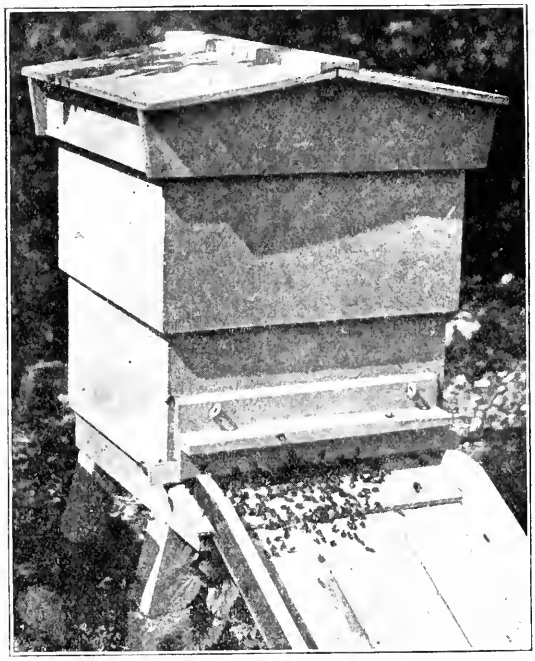


FIG. 3.

lost Queen. Externally this is indicated by the bees running rapidly to and fro on the alighting board, up the underside of the porch, and in and out of the hive (as seen in Fig. 3) instead of flying off intent upon work as they do under normal conditions.

Presently they settle down somewhat and make preparation for providing a new mother. Queen cells are built, often in excessive numbers, in a cluster, as (Fig. 4), where fifteen are seen close together. Under normal conditions the largest number I have seen in one cluster was six, and these are illustrated in (Fig. 5).

At times, when an abnormal loss takes place, the bees, in their excitement, lose all sense of proportion, and, in a frantic endeavour to make good their loss, commit blunders which, if they are allowed to complete, will eventually ruin the stock.

One of these is to build a Queen cell round a female larva more than three days old. This, of course, has been retarded in its growth by weaning, and if this has taken place for only a few hours, the resultant Queen will be a poor specimen. These are called emergency cells and are easily distinguished, as instead of being

built out on the comb, free from the surrounding worker cells, are merged amongst them (Fig. 6). The small size and malformation is seen at (Fig. 7).

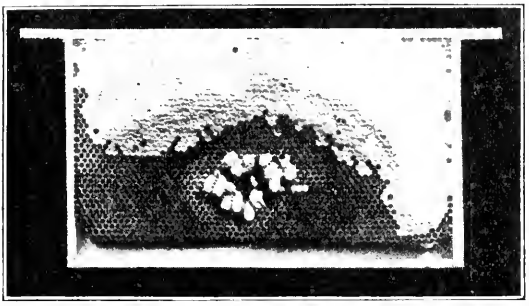


Fig. 4.

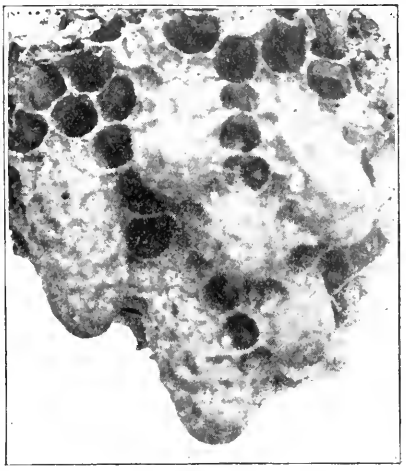


Fig. 5.

Another mistake is the building of a Queen cell round an infertile egg or male larva. These are distinguished by their smooth appearance, exactly like the capping

Fig. 6.

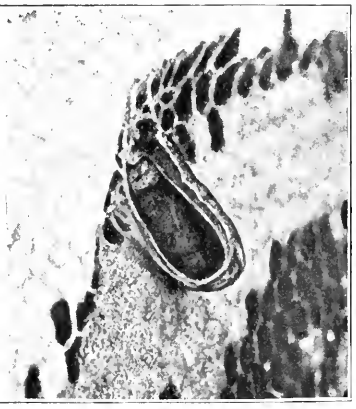


Fig. 7.

covering drone brood instead of being covered with indentations as in a natural Queen cell. (Fig. 8) shows one of these cells side by side with a natural one.

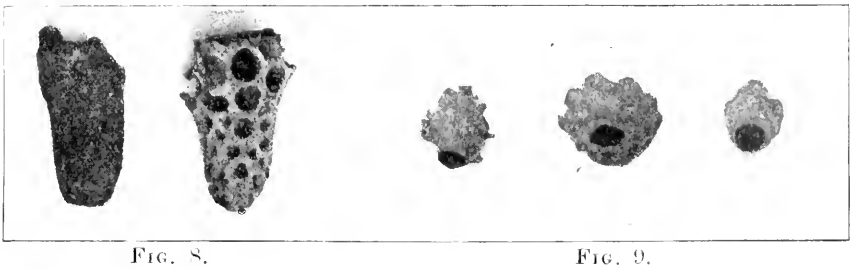


Fig. 8.

Fig. 9.

The proper course is to see that the bees build Queen cells round a fertile egg. This can be assured by enlarging the mouth of a few such, and destroying all those commenced previously.

Occasionally Queenlessness at abnormal times is revealed only by the bees commencing to build Queen cells. The detection of a new cell at its commencement is a puzzle to some, and not infrequently they mistake the base of an old one which has been cut down for the foundation of a new one.

In the former the material is generally dark in colour, and invariably the edges are very thick and smooth centre one in (Fig. 9). In a new one the base is built up, nicely rounded, the material being light brown and mealy-looking, while the surface is rough, as seen on the left, the edge of the cell is very thin and irregular, as it is being continually extended as shown on the right side.

(*To be continued.*)

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

VAGARIES OF SWARMS OR COLONIES.

[9139] Having been fortunate enough to secure two or three days' leave from duty, I, of course, spent a few hours beewards. Considering mine is an outapiary this came at a very opportune time, and I had not been on the place ten minutes before a beautiful Italian swarm came out, which I hope I have quietened for a bit, as I moved queen and stand. The bees were not long in settling down on the frames and crowding into a section rack, and I thought it advisable to add a second. I was surprised that I was quite unable to discover a queen cell older than two days. At the same time there was rather over the average of new honey, sealed and unsealed, while in another colony which was packed with brood and had little stores queen cells were nearly ripe. The swarm had not left; therefore I thought by dividing I should keep them going, but they decided to have a trip on their own initiative, so I turned them into cash. A third stock also had to be swarmed artificially. I was rather surprised to find eggs and a very few flying bees in No. 2 after two days, so I concluded the swarm came from there. I am wondering if the swarm went off with a young queen on her wedding journey. I did not have time to go into No. 3, but they appeared up to strength, as the old stock were working well in a standard frame super. My last colony was not in quite such good trim. I'm afraid they were not quite so well provided, but they will be strong in a fortnight, so I gave them a super, and considering that last June they only consisted of two shallow combs with a good percentage of drone cells, they are not so bad, as they have cost nothing to feed. I am glad to say I have only heard of one case of "Isle of Wight" disease in the district, and of about five swarms as having issued on April 28th and 29th. In my own case it is the first time for eight seasons that I have had no losses; it makes one wish that wars, &c., were finished with, opening up the way to more prosperous times, in which our craft ought to take a definite and decided share. Bee-keepers' associations might well be forming up, to attend to the wants of disabled soldiers who will need help and advice, and ours is an undertaking which can be confidently recommended to produce pleasure and profit. As there are not many districts represented in our army, there should not be many without a war committee. It is as well to remember that we pass out of the "recruit" stage in bee-keeping; it is then our duty to help others. There will be no need to ask what the "associations" do then, as the old adage will answer very well here—it is more "blessed to give than to receive." Hoping for a prosperous continuation of the present season, I am, yours faithfully, Sapr. A. H. Hamshar, Royal Engineers, Chatham.

HONEY IMPORTS.

The value of Honey imported into the United Kingdom during the month of April, 1915, was £2,116. From a return furnished to the British Bee Journal by the Statistical Office, H.M. Customs.

PRESS CUTTING.

CASUALTIES AMONG THE BEES.

Blossom everywhere, but no honey bees. That is the plaint of the fruit grower at present, who sees his hopes of splendid crops seriously threatened.

The absence of the honey bee, whose activity is necessary to carry the pollen in the blossoms from tree to tree, is due to the ravages of the mysterious "Isle of Wight" disease, so called because the Isle of Wight was the scene of its first appearance in Great Britain.

There is a melancholy appropriateness about the outbreak of the disease in this year of war, for it is supposed to have originally come to this country from the Black Forest, in Germany.—From the *Daily Mirror*.

WEATHER REPORT.

WESTBOURNE, SUSSEX.

April, 1915.

Rainfall, 1.45in.	Minimum on grass, 20, on 1st.
Below aver., .33in.	Frosty nights, 7.
Heaviest fall, .54 on 6th.	Mean maximum,54.4.
Rain fell on 12 days.	Mean minimum,37.8.
Sunshine, 195.8 hrs.	Mean temperature, 46.1.
Above aver., 5.8 hrs.	Above average, .7
Brightest day, 29th, 12.9 hrs.	Maximum barometer, 30.348, on 2nd.
Sunless days, 4.	Minimum barometer, 29.234, on 7th.
Maximum temperature, 70, on 29th.	
Minimum temperature, 25, on 1st.	

L. B. BIRKETT.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 29th to July 3rd, at Nottingham.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretaries, 23, Bedford Street, Strand, W.C. **Entries close May 31st.**

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	26	13	0

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

B. PELLY (St. Albans).—Fix it as soon as the hive becomes crowded. It will do no harm if left on.

P. PELL (Sydenham).—We have none to dispose of. You may find what you require advertised in the prepaid advertisement columns.

M. DEMPSEY (Ballyboy).—(1) The best thing you can use is Naphthaline and Apicure. (2) Make a nucleus from each hive you wish to requeen, and stand it near the hive and rear a queen therein. When she is mated depose the old queen and unite the nucleus and young queen to the queenless colony. Read the articles on queen rearing now appearing in "Helpful Hints."

J. BROWN (Stonehaven).—The plant is Mercurialis perennis (Perennial Mercury or Dog's Mercury).

R. G. VERNON (Hales).—Keep the entrance contracted, and make certain the hive is perfectly bee-tight. Sprinkle the hive front with carbolised water, or hang a carbolic cloth on the porch, reaching to within an inch of the alighting board, and sprinkle it with carbolised water at intervals. In severe cases cover the whole hive, except the entrance, with sacking, and sprinkle it with carbolised water at frequent intervals.

K. F. STUART (Fife).—The putty will do no harm. The bees would be a species of sand bee.

A. P. (Tattingstone).—It will do no harm if the colonies are strong.

Suspected Disease.

A. H. PEERS (Birmingham), J. B. (Stonehaven).—It is "Isle of Wight" disease.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS.

OWNER, deceased; quantity drawn out shallow frames, sound, healthy, 5s. doz.; twelve section racks new, quite complete, 4s. each; 12 new shallow frames, rack foundation, wired, all complete, 4s. 6d. each.—EXPERT, "B.B.J.," 23, Bedford-street, Strand.

DUTCH BEES; a few strong swarms from 10-frame hives, price 15s.—LEE, Cokeham, Sompting, Sussex. v 22

WANTED, a few early swarms of bees for cash.—Apply, SPRAKE, Bellvista, Chale, Isle of Wight. v 23

FOR SALE, whole of appliances of up-to-date apiary (no bees), including extractor, refiners, excluders, clearers, uncapping knives, heater and trays, sieves, solar wax extractor, steam ditto, tools and sundries, 36 hives (Taylor's 22s. 6d., 1st class) painted white, 10 never had bees in, fitted wired foundation, ditto supers and sections, 200 11lb. glass jars, 36 feeders, all good condition, £20 or offer; will sell separately; owner leaving district. HENSTOCK, Nesscliffe, Shrewsbury. v 24

SURPLUS; Dutch strain last autumn queen, 5s.; virgins next week, 2s. 6d.—PAUL, Salisbury-road, Bexley. v 27

10 hives of bees for sale, will sell one or more, overstocked, disease unknown.—T. WINSBY, Leyburn, Yorks. v 36

SWARMS wanted early June.—Full particulars to NEWBIGGING, Abington. v 35

FOUR superb 1914 queens for sale, 3s. each, worth double, average last season over 100 lbs., disease in apiary absolutely unknown.—J. AITKEN, Carmichael Schoolhouse, Thankerton. v 34

SWARMS from Standard hives during May and June, 15s. cash with order. J. REAVELEY, Starbeck, Harrogate. v 33

TWELVE best Lee's section racks, empty, with dividers, as new, 1s. 3d. each to clear. VINCENT, 132, Croydon-road, Anerley. v 32

1915 British queens for sale, from choice strains only, healthy; stamp, particulars.—CROWE, Stowell, Bridgwater. v 30

WAR WORK; two ladies with some experience offer help on apiary.—WAR, Box X., BEE JOURNAL, 23, Bedford-street, Strand, W.C. v 29

BEES, 2 skeps 20s. each, 2 stocks frames 25s. each, natural swarms 16s.—TOM WALL, Beeley, Rowsley, Derbyshire. v 26

20 Wilkes' queen excluders, 17in. by 14½in., good condition, no disease, cost 1s. 11d.; what offers? KETTRIDGE, Sudbury, Suffolk. v 37

40 W.B.C. hives 6s. 30 Taylor's Colonial 3s., equal to new. STAPLEY, Potton. v 28

FOR SALE, 3 nucleus on 4 frames each, healthy, 12s. each. KNIGHT, Kenwyn, Truro. v 1

REFLEX camera, cost £10, Cooke lens, 3 slides and film pack, excellent for illustrating and natural history work; approval; any reasonable offer.—N. RIGBY. Beverley Lodge, Leamington, Warwickshire. v 31

FOR SALE, swarms from bar frame hives, until May 20th. 18s.; after, 15s. 6d. each; second swarms, 11s.; guaranteed healthy.—A. WILKIN, Pymoor, Ely, Cambs. v 21

WANTED, Taylor's or Manor wax press, cheap.—18, Pitman-street, Canton, Cardiff. v 25

FOR SALE, the whole of appliances of up to date apiary (no bees), comprising 50 carpenter-made substantial hives, mostly 1in. material, 500 clean brood combs, 100 shallow frame supers, with clean combs, Cowan reversible extractor, honey refiners, excluders, clearers, foundation knives, tools, and large quantity of sundries; also extracting house, double lined, with floor and substantial bench; situate in Wiltshire; will be sold for best offer as owner has left district.—Apply, WM. DAVIES, Shepston-on-Stour, Worcestershire.

FOR SALE, several stocks in good frame hives. —For all particulars, write APIARY, Scalby, Scarborough. v 9

25 stocks bees for sale, guaranteed healthy, in W.B.C. hives, with all appliances; what offers for lot? or will sell separately stocks in hives, 30s.—T. RULE, Summervale, Annan. v 17

SECONDHAND binocular microscope, in mahogany case, by Beck, rack focusing, 2 pairs of eye-pieces, 1in. and 2in. objectives, stand condenser, mechanical stage, &c. What offers? —COOMBES, 87, Fore-street, Devonport, Devon.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

HAVING obtained a larger one, will sell small treadle grindstone, 10s.; also 12in. lawnmower; both in excellent condition.—HERROD-HEMPSALL, Apiary, Luton, Beds.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in exeellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, cloth bound copy "Bee-Keepers' Record," Vol. 7, year 1889.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED a complete comb of both a [illegible] and mild case of Foul Brood.—HERROD, "B.B.J." Office.

FOR SALE, 2 splendid stocks of bees on 10 frames each, 25s. each.—KNIGHT, Kenwyn, Truro. v 78

FOR SALE, 60 stocks of bees without hives; many just imported from the Island of Jersey, where disease is unknown.—Particulars from Manager, BRITISH BEE JOURNAL.

FOR SALE, the property of an officer now in France, stocks of bees, with hives.—Price and particulars to SERVICE "B.B.J." Office, 23, Bedford street, Strand, W.C.

THE ROYAL SHOW.

Those bee-keepers intending to exhibit at the Royal Show at Nottingham must note that entries close on May 31st. Applications for schedules should be made, and entries sent in as early as possible, to the Secretaries, B.B.K.A. Office, 23, Bedford Street, Strand, W.C. We trust that our readers and bee-keepers generally will do their best to make the "Hives and Honey" Department at the premier show of the country a success by sending in a record number of entries, and thus hearten and encourage the B.B.K.A. in undertaking to keep up their department at the show this year.

Do not forget there is the W.B.C. Memorial Gold Medal, and that Colonel T. H. Jolly has again offered a W.B.C. hive to be competed for.

NOTICE.

We are reluctantly compelled to advance the price of Apicure. The stock we held has carried us so far at the usual price, but on replenishing we find that the cost of the ingredients used in its manufacture has increased owing to the war, several being double their usual price. The prices now therefore are 1s. 8d., 2s. 10d., and 5s. 8d. per tin.

EXTRACTS AND COMMENTS.

D. M. Macdonald, Banff.

Fertile Workers.—"Do not try to save fertile worker colonies; unite them with other colonies that need the bees. This may be done quickly and safely by setting them on the top of other colonies with a sheet of newspaper between the two. The paper will be removed by the bees and perfect harmony prevail." The hint is a good one. Worrying over such colonies, endeavouring to preserve them as independent units, rarely pays. One fertile worker present almost certainly implies that there are many in that brood-nest, and that means that the stock is ultimately, inevitably bound to destruction.

The Review.—This bee paper has had rather a chequered existence since the passing away of "W. Z. H." He steered it skilfully over shoals, shallows, and troubled waters. Since his day it has been in the middle of these troubles, and several hands have held the helm. For two years now it has been an adjunct of the National—some may say a part of that association. Now, while to all intents and purposes it will be the official organ, it will have its finances entirely separated from the National B.K. Association's money matters. And that is well!

"*Legislation.*"—Pennsylvanian bee-keepers are trying to work on a large scale, for we read of "A Bill providing an appropriation of $50,000 to be used exclusively in eradicating, controlling, and preventing diseases of bees, and of enforcing the laws of Pennsylvania relative thereto." Dr. Miller expresses his pride in this action of his native state, and highly commends Governor Brumbaugh for so loyally supporting this Bill. The extensive bee-keepers are doing everything possible to secure the passing of this important measure. Their action is sane! Quite a number of other States are pushing Bee Diseases Bills.

Luck or Pluck?—Moses Quinby is described in *Gleanings* as the "father of practical American bee-keeping." One sentence struck me forcibly. His friends and neighbours tried to dissuade him from embarking in the pursuit as bee-keeping was so much a question of *luck*. This is an old superstition. Old writers had much to say about the influence of luck in determining success or failure. Quinby listened to the sage advice given, and then took his own way. He prefixed to the word "luck" a big P, and underlined it—*Pluck!* We who have studied the "Mysteries of Bee-keeping" know what pluck and determination did for its author.

April 1st *Gleanings* has done well to help to keep his memory green by publishing no less than nine articles on Quinby and what he did for apiculture, and I would fain quote extensively, but the difficulty would be what to leave out.

Australia.—Mr. Beuhne reports this as the worst season for about twenty years. There was little or no swarming. Many others report it as a very poor honey season. Bees, too, are very weak. This seems to be due mainly to an almost unprecedented lack of pollen during a great part of the year, not only in spring but also in late summer and autumn. Consequently breeding was slack and colonies dwindled. They have also many bee enemies out

there, amongst them being bee-eaters, wood-swallows, and a white-plumed honey-eater, which destroys immense numbers of bees while they are gathering honey on the sugar gums. Ants, too, have been unusually troublesome this season. Black and red spiders are also very destructive. The prize competition for March was on "What is required in a district to call it an ideal locality for an Apiary?" Apparently few real ideal sites are available even in these sunny lands of the south. There is no rose without its thorn!

Sitting or Standing.—Mr. Holterman has been contributing a series of articles in *Gleanings* on "How to Do and How Not to Do." The last deals with manipulating a hive. He there, in words and in illustrations, advocates sitting when handling frames, &c.; at which I marvel. If I saw some of our bee-keepers dealing with their bees in this way I would at once set such men down as lazy. Indeed, I don't think I ever saw a Briton sitting while handling bees, and I would set it down as a fit of laziness if I had. I know that Americans deal with hundreds of hives when we treat tens, therefore a long fatiguing day may be lightened by sitting occasionally—but I have my doubts. My contention is that when sitting there is a lack of freedom of movement, a waste of time in shifting from one position to another, and a lack of concentrated observation. The position is cramped, unsteady, and curbs initiative. I may have more to say on the question at some future time, but would like first to have the views of some of our readers.

Notes from the Punjab (p. 69).—These two very remarkable cases, where the apiarist suddenly decided to perform operations, but was forestalled by the bees themselves, permit of several explanations. One might be that the apiarist was well aware of the need, but left the operation to the last or psychological moment. Another, that he himself was psychologically sensitive to the combined thought of the hive, or conversely that the bees were receptive. Wild suggestions no doubt, but who is to delimit our kinships? There are times when bees seem extraordinarily intelligent, just as there are times when they appear to suffer from brain fag, and to be much more stupid than some other allied insects.

Virgin Honeycomb (p. 73).—This characterisation of the honey as being "taken from a virgin swarm" is new to me. Old skeppists whom I have known always mean, by this expression, honeycomb of the current year which has not been used for pollen or brood. It is not indeed easy to see wherein lies its special virtue, unless in its rarity, like the magic properties of the whiskers of a live mouse, singed by lightning and cut off by a seventh son. Is there a difference between the produce of a swarm on its first and second flittings? In Scotland perhaps the one might contain clover honey, and the other heather honey. But could not the latter be equalled, except in some magical way, by a late swarm? I think I must "come from Missouri," for I should certainly like to know! But that there should be a sufficiency of such honey to warrant general use of the recipe is unlikely, and it is to be feared that substitution by some honey-canny Scot would be the rule if the temptation were sufficiently great. It would be interesting to know the district where the more limited explanation is current, and I wish we could hear from Mr. Martin, the old cottager bee-keeper, who recently wrote the eloquent "plea for the skep."

A Lively "Bun" (p. 87, line 18).—The baker who took up the tray of buns must have thought he had picked up the deuce, and will be likely to be more careful in the future, handling these ferocious animals with caution. It is not stated whether he used an ordinary "snickle" to trap the brute, but it is fortunate that he was merely stung and not bitten, or no doubt "rabid" symptoms would have supervened.

Paint an Impediment (p. 102).—D. M. M. states that a bee has difficulty in walking upon a painted hive interior, but the difficulty is perhaps more imaginary than real. Painted wood is not absolutely smooth, the brush marks and other inequalities affording all sorts of foothold. Further, the bees can and do provide in case of need an efficient stairwork of propolis or wax. Besides, the foot of the bee is furnished with a *pulvillus* which enables it to walk upon vertical glass. And in any case, the bee is not obliged to walk upon the paint unless to show off to its young sisters, seeing that within its reach lies either unpainted wood, or that perfect bee-ladder, a honeycomb.

The Inside of the Cup (p. 102).—There is no reason why white paint should be exclusively used for hive work. I never use it at all. Certainly not for the sake

of appearance inside the hive, whatever the bees may think! And the objection to the use of paint on account of moisture does not appear sound. Is it not far better that the moisture should be condensed than that it should be absorbed by the hive wall, to the detriment of the outside paint? It may not be quite parallel, but I would rather dwell in a room with a few bowls of water than with the same water in the wallpaper or the carpet.

Paint as a Disinfectant (p. 102).—I regard the paint more as giving decent interment than as disinfecting. I regard a germ imbedded in boiled oil, and nailed down in a lead coffin, as out of action. How D. M. M. can be sure that spores thus treated became resuscitated, I do not know. Of course, inferior paint is not so serviceable as good paint, but why use inferior paint? Argument on this basis is like saying that clothes do not protect because they wear out. But. D. M. M.'s fanciful description of the sufferings of the inside coat of paint is hopelessly at variance with the facts. An inside coat will outlast an outside coat. At any rate, mine do, and my bees do well in hives painted inside and out. Will D. M. M. try it, and see if he can find any actual objections?

Opinions Differ (p. 109).—Is it quite fair, D. M. M., to confine to "comb honey" a comparison of the "take" from single and doubled hives? Would you not expect bees upon nine frames to produce more sections than bees upon eighteen or twenty, other things being equal?

Enthusiasm (p. 109).—Is it not too bad of D. M. M. to mention his "54 years among the bees"? So casually, too! It makes some of us, not without a certain opinion of ourselves, seem like beginners, and renders us apologetic for our consequent enthusiasm. Certainly we would have congratulated D. M. M. four years ago upon his patriarchate, had we known of his claim to be considered one of our "grand old men of bee-keeping." He is still young, or was when last I had the pleasure of meeting him, and in the coolness of his youth he styles Mr. Woodley a "veteran"!

Storing Wet Comb (p. 111).—I am still of my expressed opinion with regard to this practice. It would take a great deal of pressure to induce me to put away my combs sticky with honey. I pile them up on a stock needing stores, and remove them later, beautifully clean and dry. A dose of bisulphide in my fumigating chamber renders them quite safe from the moth which corrupts. But I notice that a number of prominent American bee-keepers challenge the assertion that wet combs are safe from wax moth. Some difference may be due to the density of the honey, or to the use of a power extractor. The thinner the honey, the drier the comb would be after extracting. Even wet combs may contain a number of dry cells near the woodwork.

Skeps versus Framehives (p. 112).—I wonder if Mr. Herrod-Hempsall will, upon second thoughts, consider his comparison absolutely fair. He contrasts a number of skeps producing an actual average of four or five pounds of honey with frame hives theoretically producing seventy-five. Does he mean to suggest that the same bee-keeper with the same number of frame hives in the same district would have produced the larger amount? and with the same increase, which may be the end for which he works? and with the same amount of labour and outlay? Surely not. But if the skeps should be worked for honey, may we not equally say that "the same number of stocks properly managed in *skeps* (see fig. 87, p. 119) would have produced the usual average of —— lbs. each"? I can only say that I do not average 70 lbs. per frame hive, so that the figures must refer to a district much superior to my own, or, if you like, to a more experienced bee-keeper, which would help to point my comment upon the less capable skeppist.

Photographs of Pollen (p. 129).—There seems to be an error in the numbering of the illustrations in the letterpress of pp. 128 and 129. Figs. 6, 7 and 8 should read Figs. 5, 6 and 7 respectively, with the exception of Fig. 8 on p. 129, col. ii. If Mr. Hayes will confirm this, readers might alter the numbers accordingly to make the description clear, and prevent future confusion.

[Mr. Crawshaw is quite right. It was an oversight on our part, and not the fault of Mr. Hayes.—EDS.]

Painting inside the Hive (p. 133).—I am not sure that I follow some of Mr. Flashman's objections. At the outset, I take for granted that we are discussing single-walled, or hollow-walled, hives, and not hives of the W.B.C. type. With the latter type I would paint the outer case and not the inner body box. But with the former I would paint all over, particularly if disease were prevalent. Then the burning out process, if used, merely consists of "stripping" the paint, and painting afresh. Certainly I would give two coats inside, and I do not believe that any germ buried under these would cause an outbreak of disease. I do not quite see why Mr. Flashman compares paint with glass. But glass, except for constructional objections, is by no means an unsuitable material from the sanitary

point of view. It conserves heat well, and it is a mistake to suppose that "all moisture would condense" upon it, as anyone who has an outdoor observatory hive may see for himself. As for the paint shelling off, I do not find this to be the case. Needless to say, I use good paint, made up as suggested. The recommendation to use enamel is worth consideration, but I find paint quite satisfactory, and less costly.

DERBYSHIRE NOTES.

Much has been written at various times about the wonders of the hive, and the owner of a few hives is, as a rule, never tired of entertaining his enquiring friends with tales of the birth of the queen, the industry of the workers, the life, work and death of a drone, and so on. But to me nothing is more wonderful than the spring revival in an apiary. I am always surprised when, after a hard winter, I once again hear the merry hum of my bees. Not that I would have you believe that I am a careless and indifferent bee-keeper. I pack up my bees well for winter, I see that they are well supplied with food, that the queens are all right, and the hives are weather and water-proof. But in so doing I have a feeling that I am assisting at the last rites of a friend. For me there will no longer be the sight of the heavily laden worker returning with her load of pollen, the shrill note of the drone will no more be heard, the flash of wings in the sunshine will not be seen again, until spring returns; and spring is then so far away. A visit to my apiary in the depth of winter is like visiting a city of the dead. It needs a strong imagination to picture that behind those wooden walls life is still in existence, only awaiting the call of spring, the first snowdrops and crocuses and a balmy day. I know it is so, and yet I am always surprised when, on visiting the hives on some fine day in early spring, I once again see outward signs of life. The winter-packing of my bees was to me a funeral, the spring revival is a great and glorious resurrection. Am I less hopeful than the bee-colony? I have the experience of years to guide me in my knowledge that a resurrection will come. Not a bee in any of the hives, unless it be a queen, has ever experienced before the cold of winter daily becoming more intense until it finally compels them to form that dense cluster in the interior of their hive. Whence comes to them that spark of hope, causing them to hold so tightly to life, and ere the winter be half gone to commence once again their labours for the coming summer, which none perhaps will see? We may ask in vain whether it lies in the interior consciousness of individual bees or whether in that communal consciousness which Maeterlinck calls the "spirit of the hive." Certain it is that no individual bee has the memory of such a previous time. In the hive there is nothing similar to Tennyson's "Many wintered crow that calls the clanging rookery home."

There is here a lesson to the individual bee-keeper, and to the world at large. It need not be pointed out. He who will may read it and learn it. Once learned, surely it will influence one's whole life.

And when spring has once again revived the dormant life of the hive, what then? During my winter reading I came across a poem in an old bee-book, by Henry Taylor, published in 1855. The poem is anonymous, but I would like to have met the man who wrote it. So far as I know it has never appeared in the BEE JOURNAL, and maybe the Editor will publish it. It gives a glorious picture of one aspect of bee-life, so I think.

D. WILSON.

THE SONG OF THE BEES.

"We watch for the light of the morn to break,
And colour the grey eastern sky
With its blended hues of saffron and lake;
Then say to each other, 'Awake, awake!
For our winter's honey is all to make,
And our bread for a long supply.'

Then off we fly to the hill and the dell,
To the field, the wild-wood and bower;
In the columbine's horn we love to dwell,
To dip in the lily, with snow-white bell,
To search the balm in its odorous cell,
The thyme and the rosemary flower.

We seek for the bloom of the eglantine,
The lime, pointed thistle, and brier;
And follow the course of the wandering vine,
Whether it trail on the earth supine,
Or round the aspiring tree-top twine,
And reach for a stage still higher.

As each for the good of the whole is bent,
And stores up its treasure for all,
We hope for an evening with heart's content
For the winter of life, without lament
That summer is gone, with its hours misspent
And the harvest is past recall!"

NECTAR-PRODUCING PLANTS AND THEIR POLLEN.

By George Hayes, Beeston, Notts.

(*Continued from p.* 142.)

FLOWERS TO GROW FOR BEES (*cont.*).

SQUILLS (*Scilla siberica*).

These are bulbs and should be obtained and planted in October in the same manner as that advised for crocuses.

The colour of the flowers is a lovely blue. They grow two to five on each stem and are like a small hyacinth. They yield both nectar and pollen; the latter being of a dark blue shade. Squills flower in February and the bees revel in their pendant blossoms on genial days. They look equally well either as an edging to borders or in patches. After flowering, if they are in the way they may be lifted and dried for use again. If left in the ground they multiply rapidly and will require dividing after the third season.

HYACINTHS AND TULIPS.

The bulbs of these are procured in October and set in pots, beds, boxes, or borders. If in the latter the crowns of the bulbs should be covered with two inches of soil to protect them somewhat from frosts. Both these flowers are showy and sweet smelling, the hyacinth particularly so, but unfortunately for the flowers a display of them in the open does not last very long where bees, who are very fond of them, can get at them, and by their assiduous attention to them the blossoms quickly become fertilised, and when this occurs there is no need on the part of the plant for further display and the flowers die.

SWEET ALYSSUM (*Alyssum saxatile compactu*).

Although there are white varieties of alyssum which are hardy annuals, the one under consideration—a golden yellow in colour—is a perennial. It is easily raised from seed, but for immediate display it is better to purchase plants, which only cost a few pence each. It is very suitable for rockeries and poor soils as well as for the border. I believe it gives more pollen than nectar and blooms from April right through the summer.

ROCK CRESS (*Arabis alpina*).

This is often misnamed the white Alyssum or Allison. It is to be found in almost every garden and is used for edging, rockeries, vases, &c. It is a free-growing and good blooming plant, and flowers early in the spring, in March and April, yielding well both pollen and nectar, and is dearly loved by bees as well as by butterflies. It will grow in almost any position and condition. I have seen it in damp, obscure places and also perched on the top of some high wall, one root permeating a joint in the stonework, and a mass of foliage and flower hanging on the face of the wall. It is generally propagated by slippings, and if these are taken and dibbled in during damp weather few fail to grow. There is no need to buy it, for if you have a friend with any he would always be glad to part with some.

AUBRETIA.

This is another plant very similar in habit to arabis, except that it is more dwarf and compact. This, too, is often misnamed, some calling it *Blue Allison* from the bluish purple flower of the more common variety. There are more than 25 cultivated varieties of this flower.

It may be raised from seed sown in June, when the plants have time to get strong enough to withstand the winter and to flower in the following spring. As it is a perennial it can be increased by slippings. A good sized plant forms a beautiful cushion of foliage and flower. It is especially suitable for places where it can be left undisturbed for years.

PRIMULUS.

This is a large order of plants with many species and varieties for both indoor and outdoor culture. The bees are extremely fond of them, and they offer food at times when it is somewhat scarce, and for that reason deserve to be placed on our list.

They can all be raised from seed or propagated by division as most are perennials.

WALLFLOWERS.

Bees are exceptionally fond of these flowers, and besides their usefulness in this direction they are valuable for garden decoration in spring and supply cut flowers for indoors which are particularly sweet when fresh.

I never think an odd plant here and there means much, but if wallflowers are planted in masses, either in clumps or borders, they are very telling.

These are biennials, and the seed should be sown not later than June in drills, and when two or three inches high should be transplanted a foot apart so that they will make strong bushy plants ready for putting into their permanent quarters about October. After transplanting water well for a few days to prevent the leaves drooping in consequence of rapid evaporation.

CANTERBURY BELLS AND OTHER CAMPANULAS.

All the campanulas or bell flowers are useful to our bees, and some of the species are very beautiful and delicate. *Cam-*

pumila carpatica, both blue and white varieties, are low growing, delicate little flowers, and are used for making edgings to borders. Then we have *C. fragalis* or *isophylla*, a trailing plant and suitable for pots and hanging baskets, and *C. pyramidalis*, a stately plant for the border, growing to a height of 3 or 4 feet, with a girth of about a yard.

These are all perennials. Seed should be sown in light compost, and in the case of the smaller seeds protected from heavy showers and the splash of the water-can by a sheet of glass, they can be sown in a cold frame until the seedlings come up, which, when strong enough to handle, should be transplanted into their permanent positions.

They may also be propagated from slippings in the early spring. The plants in pots should not be allowed to get very dry, but, on the other hand, they should not be allowed to stand continually in a saucer of water.

The Canterbury Bells are biennials, and usually die after they have flowered, so that seed for these should be sown every July if a succession of plants is required.

LIMNANTHES DOUGLASSII.

This is an annual, and like others of its sort is raised from seed sown in March—but much earlier and stronger plants may be obtained if sown in August of the preceding year. These young plants, unlike many other annuals, will bear moving. The seeds will be found mentioned in most dealers' catalogues, attention being drawn to the fact that they are "good for bees."

It is not everyone that finds them as good as they expect, for some have written to say they have never seen a bee on the flowers. This may be so for two reasons: First, climatic conditions must be suitable, and secondly, when the blossom does secrete nectar it is before mid-day, and there is very little need for bees to go to the flowers in the afternoon.

On a warm, sunny morning, after a genial night, the nectaries, which are plainly visible in this flower, are seen teeming with nectar, and bees are found in great numbers sipping the sweets in a business-like way.

It has many local appellations, as Chinese primrose, cheese and eggs, &c.

HERBS FOR BEES.

Several of the herbs supply good pasturage for our bees. First and foremost is the sage. I have gone into some gardens where they have had several large bushes of sage in flower, and the day being suitable found innumerable bees busily engaged on them. Thyme, too, is another herb that is useful in this way, and so is borage. Not only is this latter used as a herb, but is useful for the flower garden. It has come into prominence lately, so that now there are several varieties of it. It is an annual, and must be raised from seed each year. Chickory, lavender, and marigold are helpful to them. The disadvantage of the first-named is that it becomes a large straggling plant, and although the individual flowers are a lovely blue of a kind rarely seen, the plant is somewhat unsightly in its habit.

(*Finis.*)

BEE-KEEPING IN NEW ZEALAND.

The season of 1914-5, which is now practically closed, will be reckoned as one of the worst experienced by bee-keepers.

The early spring was one of great promise, but cold high winds set in and prevailed in most places for months on end, coupled with dull showery weather, so that heavy feeding was necessary to keep the stocks strong. A spell of fine weather was experienced just after Christmas, which the bees took advantage of, then high winds came again, cutting off our chances of a late flow from thistles, which in this district (Taranaki) usually means a big crop. The dry weather prevented the blooms opening, and the bushes died without maturing. Only in the Manawatu district have they had a crop, and that a phenomenal one, a bee-keeper there with 500 hives getting over thirty tons of honey. Two years ago this man's crop wasn't worth extracting, so the district must be peculiar.

Against all this we have a set-off in the shape of a signed and sealed contract with a large firm of exporters for the supply of not less than 100 or more than 500 tons of honey every year for three years, and that at the best price ever obtained by bee-keepers. This honey will be sent to England, where it will be put up in glass jars, and sold as N.Z. produce. This is a thing we've been trying to establish for years, as we have pretty certain evidence that our honey has been sold as Californian, Narbonne, and even English honey.

There is no doubt that N.Z. can, and does, produce some of the finest honey in the world, and we feel that if we can only get our produce on the English market, under its true name, we shall have no need to go in for extensive advertising to effect large sales. This will now be done, and I hope some of our brother bee-keepers in the old country will secure a sample when they see it for sale, and pass their opinion on it.

The exporters have also agreed to make exhibits of honey at all the big shows held in England, which is a thing we

haven't been able to do before, and I hope the various associations which happen to show at the same time will find us worthy competitors.

This excellent agreement has been brought about by the N.Z. Co-Operative Honey-Producers' Association, Ltd., which was formed by a body of bee-keepers who were dissatisfied with the way the bee-keepers were at the mercy of the merchants, who kept the price low by setting one bee-keeper against another, with the result that a fair price was not obtained. The association now deals with the merchant to a much better advantage, as none of the bee-keepers who are shareholders need trouble about finding a market; all they do is to supply the honey to the association, and receive an adequate advance in cash.

The honey is taken to a depôt, where it is put up in the various marketable packages, also packed in bulk for export. The packages are put on the market under one uniform label at a uniform price, which is found to command a better price than under the old conditions.

At the end of the year the profits, which during the first year's operations have proved very satisfactory to all concerned, are divided among the suppliers.

The co-operative movement is spreading all over the dominion, we having shareholders from extreme north and south; and we believe in a few years the whole of the honey output of the dominion will be controlled from one head, to the benefit of those who are engaged in the industry.

FRED C. BAINES,
Normanby, Taranaki, N.Z.

SURREY B.K.A.

ANNUAL MEETING.

The annual meeting of the Surrey Bee-keepers' Association was held at the Technical Institute, Redhill, on Friday, April 30th, 1915. The chair at the meeting was occupied by Mr. W. Welch, J.P., C.A. (President of the Association), and those present included: Messrs. A. Seth-Smith (Cobham), A. T. Hedger (Caterham Valley), A. H. Hamshar (Bramley), A. E. C. Mumford (Redhill), C. T. Overton (Crawley), G. A. Page (Kingswood), W. T. Palmer (Redhill), and F. B. White (Redhill), hon. secretary and treasurer.

The President, in moving the adoption of the report and balance-sheet, said he was sorry to see the members were still on the decline. He thought the membership was 253, while last year they had 323 members on their books. That was, of course, largely accounted for by the fact that many bee-keepers had lost their bees. He stopped keeping bees himself for three or four years, but he started again last year with two hives, and got 140lbs. of honey. His bees this year were very strong. He was extracting honey from the old frames. With regard to the grant from the County Council, unfortunately the Agricultural Committee of the County Education Committee had found it impossible to make the same grant this year. The call for economy was felt on all sides, and the Education Committee was very hard hit by the fact that the Local Government Board had refused to allow them to undertake loans, and they had to cut down their expenses in every possible way they could. Mr. Seth-Smith had an interview with the committee, and they discussed the situation with him, and ultimately decided, instead of making a grant of £150, to give them a grant of £60. That £60 was to provide what was arranged for under Clause 11 of the agreement: that was to pay for expert visits, for the *Journal*, and postages and stationery. The Association must do all it could to cut down expenses to meet this deficit. They were glad to learn from the report that the bee season for 1914 was most favourable to bee-keeping. The show had to be abandoned owing to the unfortunate war in which we were engaged. With regard to the financial position they did not seem to be in a very bad way. In the statement of general income and expenditure they had a balance of income over expenditure of £17 16s. 11d., as against £11 1s. 5d. in the previous year. From the statement in the balance-sheet they seemed to have a balance of £198 0s. 3d., whereas in the previous year it was only £182. In addition to doing all they could to reduce their expenditure they must do all they could to encourage the growth of bee-keepers, and to induce those bee-keepers to become members of the Association. (Applause.)

Mr. Mumford seconded the motion.

Mr. White remarked that many stocks had been lost, but inasmuch as a great number of members whose bees had died during the winter had cleared them away, it was impossible for their experts to say whether these bees had died from "Isle of Wight" disease or from starvation. Many members lost their bees from absolute neglect and want of knowledge of bee-keeping.

The motion was then adopted.

EDUCATION COMMITTEE THANKED.

Mr. Seth-Smith proposed a vote of thanks to the Surrey Education Committee for the grant of £150, made for the purpose of carrying out certain educational work by the Association, and for the gratuitous use of rooms for the annual

and council meetings. He remarked that had it not been for the backing up they had received from the county authority all these years they could not have carried out the work that had been done, and which had made the Surrey Bee-keepers' Association pretty nearly the leading association in England. They were extremely grateful to the County Council for the way they had treated them during the last twenty years. With regard to his interview with the committee his impression was that the grant of £60 this year was merely to be considered as a war grant, and that when things were better they would hope to reconsider the position and give them a better grant.

Mr. Hedger seconded the motion, and remarked that many people went to flower shows to hear the bee lectures, so that not only did they benefit themselves, but assisted the shows generally.

The Chairman acknowledged the vote of thanks, which was heartily carried, and said he had had an interview with Mr. A. S. Daniell, Chairman of the Agricultural Committee, who spoke of the great regret that was felt at the need there was for the reduction of the grant, but there was no help for it this year, at all events. He hoped the committee would make a higher grant another year. (Hear, hear.)

OTHER BUSINESS.

On the motion of Mr. Palmer, seconded by Mr. Page, a vote of thanks was accorded the retiring council, joint committee, and officers, and this was acknowledged by Mr. White, who paid a tribute to the work done by the members of the Executive Council.

The following were elected members of the Executive Council for the ensuing year:—Lieut.-Colonel J. A. C. Younger, Messrs. A. Seth-Smith, R. C. Blundell, F. S. Fletcher, G. C. Halahan, W. E. Hamlin, A. T. Hedger, J. Kaehler, J. W. Lewis, W. F. Reid, E. J. Stevenson, E. Walker, A. Watkin, T. H. E. Watts-Silvester, M.A., M.R.C.S., and F. B. White.

Mr. White said they would have to exercise great economy this year. It was very desirable that they should be able to give every member an expert visit, and he suggested they should do without the inset to the JOURNAL, remarking that he would amplify his monthly notes.

Mr. Overton stated that several tons of honey were lost every year through bee-keepers not having sufficient knowledge. Last year was a wonderful year for bees, and it was a sad sight to see so much honey unsecured by want of knowledge and management of bees. He was glad to be able to say that the "Isle of Wight" disease was now passing away. He supported the suggestion of the hon. secretary, remarking that his monthly notes were instructive and of great value.

The meeting closed with a vote of thanks to the President, on the motion of Mr. Seth-Smith.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

ANOTHER EARLY SWARM.

[9140] As a frequent visitor at Baylis House, where bees are kept, I had the pleasure of renewing my acquaintance with them this morning, May 10, by hiving a good swarm. During the early spring months several stocks were lost through "Isle of Wight" disease, but the remaining stocks appear healthy and strong.—C. H. HAYNES.

PRESS CUTTING.

THE USES OF HONEY.

Bee-keeping is receiving greater attention, and although it is hardly likely that honey will ever regain the high esteem with which it was once regarded, the superiority of honey over cane or beet sugar is being gradually recognised, and the medical profession is advocating its use in invalids' dietary, on account of its greater digestibility.

Without going too much into scientific details, it may be stated that chemists divide sugars into two classes—the first, sucrose, sometimes called cane sugar, being the product of the sugar-cane, the sugar-beet, maize-stem, and maple-sap; the second, glucose or grape sugar, existing in three forms, dextrose and lævulose—which makes up the bulk of honey—and maltose, which occurs in the sprouted grain of malt. Midway between these two classes is lactose, or milk-sugar, which resembles cane sugar in composition and grape sugar in many of its characteristics. Although cane sugar is soluble in water, it cannot be assimilated in the body until

it has undergone digestive changes whereby it is converted into glucose, which is absorbed by the system without undergoing further change. Thus honey, being a form of glucose, is more easily digested than any form of cane sugar or sucrose, and when the digestive powers are low, as in the case of invalids and delicate children, it is a great gain to supply a force-producing food which does not make any demands on the digestive organs themselves.

Apart from the digestibility of honey, there are a purity and wholesomeness characterising it which make it a specially desirable form of food. This was accounted for by ancient writers by the theory that, being collected from so many herbs, plants, and flowers, it is the quintessential part of them, and that by its use health would be maintained, so that the medicinal virtues of the plants would not be required for healing purposes.

The sweetness, which is its chief attraction to the young folks, is apt to pall on the palate of their elders; but honey can be used in other forms and disguised in various ways, so as to minimise this objection.

Cooling beverages can be made from honey prepared as a flavoured syrup and diluted with plain or aërated water. Such syrups are very easily prepared, and admit of great variety. Fruit honey-syrup is made by allowing 1½ pints of juice squeezed from soft fruits, such as currants, raspberries, mulberries, or blackberries, to 2lbs. of honey, and boiling them together until they form a thick syrup, from which the scum must be removed as it rises. Similarly, rose-petals, violets, cowslips, and orange-blossoms may be used to give flavour to honey-syrups. Boil 2lbs. of the petals in 2 quarts of water for half an hour, strain it through muslin, add to the liquid 2lbs. of honey, and boil it to a thick syrup, clarifying it by the removal of scum.

Honey enters into the composition of less simple beverages, and the almost forgotten honey-beverages of olden times are again coming to the fore. The best known of such drinks is mead, for which I give a reliable recipe.

SIMPLE MEAD.

Mix 6galls. of water and 1gall. of honey, and boil them together for an hour, removing the scum when it is firmly caked on the top. Let the mixture stand until it is just below blood-heat. Take a crust of brown bread toasted on both sides, and spread the top thickly with new yeast, sprinkle a little flour over the yeast, and place the toast in the mead. Cover the vessel with a board, and set it aside in a warm place for two days. Remove the toast, bottle the mead, and keep it in a cool cellar till required for use.—From the *Bazaar*.

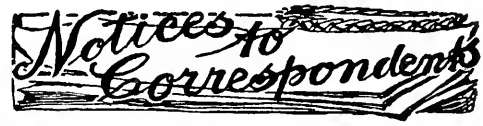
ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	26	13	9

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 29th to July 3rd, at Nottingham.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretaries, 23, Bedford Street, Strand, W.C. **Entries close May 31st.**



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

F. Valentine (Workington).—The queen is a virgin and was probably reared last autumn. She is a native. There is no deformity, but she is small. The bees will rear another one on the last comb given them now you have removed the useless queen.

Honey Sample.

G. B. C. (Gimingham).—The quality of the honey is good.

Suspected Disease.

A. B. K. (King's Langley).—(1) The bees are suffering from "Isle of Wight" disease. (2) No.

R. J. (Dinas Powis); YSIAD (Penally).—The bees are suffering from "Isle of Wight" disease.

6060 (Galashiels).—We do not find disease in the bees sent. From the symptoms you describe we should say that the rest of the bees had died from dysentery or "Isle of Wight" disease. The queen appears normal.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ¼in., *or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS.

TWO 28lb. tins medium extracted honey; also sixty well filled sections; what offers?—TROTTER, Shadwell, Leeds. v 47

BEES.—Strong stocks English, on wired standard combs, healthy, 30s. each; travelling boxes returned paid.—BLAKE, Church-street, Ilfracombe. v 46

FEW healthy stocks of bees, in skeps, 13s. each.—SEMMONS, Leiston, Suffolk. v 45

FOR SALE, owing to ill-health, eleven healthy stocks of English bees, in wooden hives; quantity crates, dividers; no reasonable offer refused.—A. WALKER, Swanley Farm, Eastchurch. v 44

WANTED, honey extractor, perfect condition; state make, price, willingness approval.—WATSON, Post Office, Staplehill. v 40

BUSINESS ENCYCLOPÆDIA & LEGAL ADVISER, 6 vols., cost 63s.; what offers? or would exchange honey press and bees.—"HUSTLER," c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 41

SWARMS for sale, healthy, natural swarms; May, 12s. 6d.; June, 10s.; boxes returnable.—C. LYNCH, Sgt. R.I.C., Killamary, Windgap, Co. Kilkenny, Ireland. v 39

FOR SALE, extractor, cog gearing, with lids, in perfect condition used one season, cost 30s., accept 16s. 6d.; section rack, fitted full sheets, 2lb. weed foundation, quantity Abbott's patt. frames, &c., all new, 7s. 6d.—MULLEY, Banbury. v 42

HEALTHY Dutch swarms for sale, 3s. 6d. per lb., boxes free.—H. JONES, Brynkir Factory, Garndolbenmaen, Carnarvonshire.

STRONG stock Italians, in strong hive, 30s.—LEDGER, Newstead-road, Lee. v 38

SIX section racks, complete, free from disease; will exchange for bees, shallow frames, or cash.—M. B. WHITEHEAD, Mona-terrace, Farsley, near Leeds v 49

DUTCH BEES; a few strong swarms from 10-frame hives, price 15s.—LEE, Cokeham, Sompting, Sussex. v 22

SWARMS from Standard hives during May and June, 15s. cash with order.—J. REAVELEY, Starbeck, Harrogate. v 33

BEES, 2 skeps 20s. each, 2 stocks frames 25s. each, natural swarms 16s.—TOM WALL, Beeley, Rowsley, Derbyshire. v 26

FOR SALE, swarms from bar frame hives, until May 20th. 18s.; after, 15s. 6d. each; second swarms, 11s.; guaranteed healthy.—A. WILKIN, Pymoor, Ely, Cambs. v 21

FOR SALE, several stocks in good frame hives.—For all particulars, write APIARY, Scalby, Scarborough. v 9

25 stocks bees for sale, guaranteed healthy, in W.B.C. hives, with all appliances; what offers for lot? or will sell separately stocks in hives, 30s.—T. RULE, Summervale, Annan. v 17

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

HAVING obtained a larger one, will sell small treadle grindstone, 10s.; also 12in. lawn-mower; both in excellent condition.—HERROD-HEMPSALL, Apiary, Luton, Beds.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, cloth bound copy "Bee-Keepers' Record," Vol. 7, year 1889.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, 60 stocks of bees without hives: many just imported from the Island of Jersey, where disease is unknown.—Particulars from Manager, BRITISH BEE JOURNAL.

FOR SALE, the property of an officer now in France, stocks of bees, with hives.—Price and particulars to SERVICE, "B.B.J." Office, 23, Bedford street, Strand, W.C.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price. cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

A FEW healthy swarms, 15s. each.—J. BRADFORD, bee expert, Upton-on-Severn, Worcestershire. v 48

BUSINESS ADVERTISEMENTS.

WILKES' free-way excluder and non-swarming method have resulted in enormous takes of honey; sample excluder, 2s.; illustrated work explaining prevention of swarming, with many photos, 1s. 1d.; send for 1915 catalogue, all post free.—WILKES, Four Oaks, Birmingham.

WANTED, customers for pure English honey, tins, bottles, sections; wholesale.—Write SEAL BROS., Hereford. v 50

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, May 20th, 1915. Mr. W. F. Reid presided, and there were also present Miss M. D. Sillar, Messrs. C. L. M. Eales, G. S. Faunch, Rev. F. S. F. Jannings, G. J. Flashman, J. B. Lamb, G. W. Judge, J. Herrod-Hempsall. Association representatives, Messrs. G. R. Alder and G. Horscroft (Essex), G. Bryden (Crayford). In the unavoidable absence of the secretary, his duties were undertaken by Mr. J. Herrod-Hempsall. Letters expressing regret at inability to attend were read from Messrs. T. W. Cowan, E. Watson, and A. Richards.

The minutes of Council meeting held on April 15th were read and confirmed.

The following new members were elected: Mrs. R. A. Dangerfield, Messrs. T. A. Dennison, and G. Griffiths.

The following Associations nominated representatives to the Council, and they were accepted: Cumberland and Westmorland, Mr. J. Steel; Leicestershire and Rutland, Mr. W. W. Falkner; Lancashire, Dr. W. Anderton. The Derbyshire Association submitted the name of Mr. G. T. Pallett, and he was accepted subject to the usual form of declaration being sent to the secretary.

An application for affiliation by the Sheffield and District B.K.A. was considered, and on the motion of Mr. Lamb, seconded by Mr. Eales, it was resolved that they be accepted subject to the usual conditions.

The report of the Finance Committee was presented by Mr. Eales, who stated that payments into the bank for the month of April amounted to £14 4s. 11d., the balance at the bank being £217 14s. 7d.

The secretary was instructed to write to the hon. solicitor and ascertain the exact position in which the Association stood respecting the insurance of expert. It was resolved that the Council consider future arrangements at the experimental apiary at the next Council meeting to be held on June 17th, at 23, Bedford Street, Strand, London, W.C.

LANCASHIRE BEE-KEEPERS' ASSOCIATION.

ANNUAL MEETING.

The Annual Meeting of this Association was held in the Storey Institute, Lancaster, on March 27th, 1915.

The President, E. B. Dawson, Esq., LL.B., J.P., occupied the chair.

There were forty members present, from various parts of the county.

The minutes of the last Annual Meeting were read and confirmed.

The secretary having sent a copy of the report to all the members, the President moved its adoption as printed.

The hon. treasurer then read his report and compared it with that of last year, showing a balance in the bank of £20 15s. 4d., and a profit of 10s. 4d. for the year's working. This was adopted.

Votes of thanks were accorded to the committee, officers, and hon. auditor, for their onerous duties of the past year.

E. B. Dawson, Esq., was again elected President for 1915. He gratefully thanked those present for again placing their confidence in him, and gave a short outline of his and his ancestors' methods of bee-keeping.

The members of the committee were then elected, consisting of Dr. Anderton, Messrs. J. N. Bold, Wm. Carr, R. Harrison, T. Ireland, T. Lunham, R. Tyrer, J. H. Walmsley.

Mr. Taylor was again elected hon. treasurer and hon. librarian.

Mr. J. Wildman, of Holly Cottage, Forton, Garstang, was elected hon. secretary in the place of Mr. Walmsley, who resigned on account of not having sufficient time to devote to the work of the Association.

Mr. R. E. Smalley was re-elected hon. auditor.

Dr. Anderton and Mr. F. H. Taylor were re-elected representatives on the Council of the British Bee-keepers' Association.

At the close of the meeting a vote of thanks was given to the president for his attendance, and he suitably responded.

After the meeting was over a show of honey and wax took place. There were six classes; forty-seven entries were made, which were of excellent quality. Mr. Chas. H. Heap, of Kingston-on-Thames, judged the exhibits, Mr. Walmsley acted as steward. The awards were as follows:—

Class 1: 1st, Chris Hudson; 2nd, Mrs. Proctor; 3rd, R. Jackson. Class 2: 1st, P. M. Ralph; 2nd and 3rd, Chris Hudson; 4th, H. Mackereth. Class 3: 1st, T. Ireland; 2nd, Wm. Abram. Class 4: 1st, P. M. Ralph; 2nd, T. Ireland. Class 5: 1st, Chris Hudson; 2nd, P. M. Ralph; 3rd, Thos. Proctor. Class 6: 1st

and 2nd, Chris Hudson; 3rd, H. Mackereth.

In the evening a lecture on "Some Essentials of Successful Bee-keeping" was given by Mr. Chas. H. Heap, at which there was a fair attendance.

The monthly meeting of the committee was held at Preston on Saturday, May 8th.

Present, Dr. Anderton (chairman), Messrs. Taylor, Walmsley, Carr, Warwick, and the Hon. Sec. Mr. C. H. Heap, the association's expert, was also present.

The business included the appointment of two local hon. secs. Miss Ada Carr, of Bentham, for a new district formed out of the Settle District, and Mr. Chris. Hudson for Lancaster District.

A gift of books to the association's library by Mr. Rowland Parker, of Milnthorpe, was gratefully accepted, and the thanks of the committee accorded to the donor.

The purchase, for addition to the library, of volumes of the "Record" for years 1910-14, and the "British Bee Journal" for 1912-13-14, and one copy of "Producing, Preparing, Exhibiting, and Judging Bee Produce" was ordered.

Certain modifications were made in the schedule for the Honey Competition at the next annual meeting, which will duly appear in the Annual Report.

It was resolved that the next meeting be held at Southport on June 12th.

The expert then gave an account of his tour thus far. The most disquieting feature of his experience was the wide-speading prevalence of the "Isle of Wight" disease; it has broken out in many parts of the country, and has caused great loss.—*Communicated.*

Mr. T. Gardner.

OBITUARY NOTICE.

THE LATE MR. T. GARDNER.

Such merry souls as Tom Gardner come rarely on to the stage of life. We all have our entrance and our exit, but it is not given to many to be so widely known and revered. It is often said that the true bee-keeper is born, not made. Tom Gardner was not only a born bee-keeper,

but also that rarest of all good things—a born humorist. A staunch abstainer, a non-smoker, strong, gentle, full of pathos, he dearly loved a joke. Most of us are more or less solemn persons. Tom merely talked, and as if with magic wand the solemn faces were smiling and splashed with reverberating laughter. How many of us have even lost our simple faith, have become scientific; nothing is wonderful now, even pollen grains have been analysed, impaled and explained. Tom's reflections were never discoloured by such matters of fact; his bees, swarms and queens were always in the region of romantic beauty. The glamour of his early bee-keeping was associated with the dome-shaped skeps, and although he changed over to the bar-framed hive it was never without some regret for the mystery and charm of the old time bee-keeping.

One of the originators of the Northumberland and Durham Bee-keepers' Association, founded in 1893, he was its most constant supporter, invariably present at the bee-keepers' excursions, and occasionally acting as judge at the honey shows. It was, however, his keenest joy to take the annual trip with the bees to the moors in the month of August, to the "wild hills of Whanney," one of the spurs of the Cheviots, a road journey of about thirty miles. The moor trip is the magnet that fixes the north country bee-keeper, and what better companion than Tom Gardner, so optimistic and cheerful, appreciating so fully the silence of the night, at dawn the purple of the heather, the welcome at the shepherd's house, and the shouts of the children.—J. N. KIDD.

PREVENTING "ISLE OF WIGHT" DISEASE.

As inquiries how to prevent this scourge from attacking healthy stocks are being constantly received it will perhaps be of use to give a few precautions that may be taken towards that end. But "right here" let me say that just as there is up to the present no reliable permanent cure, it is quite possible that even after the bee-keeper has taken all precautions his colonies may be attacked. I have read somewhere that one of our British generals, at the time when the old flint and steel rifles were in use, gave his men this advice: "Trust in God and *keep your powder dry.*" That seems to me very applicable to taking precautions against "I.O.W." disease. Some of my readers may think, "Why take any trouble? If the disease is about, my bees are sure to get it." Those soldiers might have reasoned, "Why trouble to protect my powder pan? I shall probably be killed early in the fight." But who was more likely to be killed—the man with damp powder and a rifle useless in an emergency, or the one whose powder was dry and who stood at least an even chance with his enemy? Don't be discouraged by your apparent helplessness in combating this disease, but do all in your power to prevent its spreading, and then trust in Providence. Remember another old and trite proverb: "The gods help those who help themselves." In fighting disease it is well to know all that there is to be known about it, and to this end I would advise all bee-keepers to get the supplements to the Journal of the Board of Agriculture, Nos. 8 and 10, the former costing 1s. and the latter 4d., post free from the Secretary to the Board of Agriculture, 4, Whitehall Place, London, S.W. In taking preventive measures, one or two points in the life-history of *Nosema Apis* must be taken into account. In the first place, before a Nosema spore is able to affect a bee it must be "ingested"; that is, taken into the stomach and intestines. While it remains outside the bee it is harmless, and as we have up to the present no evidence that the spores may affect the bee by being taken into the system through the spiracles and trachæ, we naturally come to the conclusion that they must be taken in through the mouth. After finding a suitable position in the walls of the bee's stomach the Nosema "hatches," if I may so term it, into what is known as a "planont," and is able to move about and also reproduces itself and multiplies very rapidly. Later, the "planonts" become "meronts." These are more or less stationary, and later on reach the spore stage. Now, should the "planonts" multiply so quickly that the bee dies before the Nosema have got beyond that stage, they also die very shortly after the death of the bee. When the bee is not so badly affected, or is more "resistant" to the disease, the Nosema reach their full development and become spores. These have been known to retain their vitality for two years, and it is quite possible they may remain virile even longer than that. Where the bees are able to pass the fæces these will be full of Nosema in all stages. But it will be seen that those bees which are diseased, but hang on for a considerable time, are much more dangerous to healthy stocks than those that die off quickly, both with regard to the dead bees and to the excrement, owing to the number of Nosema in the spore stages which they distribute. The former are, in fact, "germ carriers," and we may add to that "germ distributors." Probably the most fruitful source of in-

fection is water containing Nosema spores taken into the hives by the bees, especially in the spring. If left to find water where they can, the bees are quite likely—should the disease be in the neighbourhood—to get some that has been contaminated by the excrement of diseased bees or by diseased bees dying in or otherwise getting into the water. It will be noticed that the disease spreads more rapidly in wet than in dry seasons. Efforts should be made to get the bees accustomed to go to one place for water, and great care should be taken to keep the supply *pure and constant*. A device such as that given by Mr. Harper in a recent issue of the "B.B.J.," may be fixed up, and in order to attract the bees to the water I pass on a "dodge" given me by Mr. Bocock. Melt some beeswax, the fresher the better, and let fall a drop at a time on to cold water. This will give you a number of flakes of wax which may be placed in and will float on the drinking water. The aroma will attract the bees, and the wax will give them the means of obtaining the water without danger of drowning. When the aroma has gone the flakes may be replaced by fresh ones, and the old may still be used for other purposes. Some remedy may possibly with advantage be dissolved in the water: 10grs. of sulphate of quinine or 10 grs. of crude catechu to a gallon of water, or use one of the remedies advertised in our columns. The ground surrounding the hives should, if possible, be kept clear of vegetation and sprinkled with quicklime at intervals and dug over, the surface being kept loose. Bees drop most of their excrement in the immediate vicinity of the hives, and after a shower, or when there has been a heavy dew, they may be observed taking water from grass or other vegetation near the hive, or even from the moist soil, and this moisture may contain Nosema spores. Another plan given in the "Journal" some time ago is to spread sawdust round the hives and sprinkle it frequently with some disinfectant, Izal or carbolic acid. Fresh sawdust may be added at intervals. Don't forget to keep both the inside and the outside of the hive clean—remember dirt and disease are close friends. The interior of the hive should be supplied with disinfectant, and from data supplied by several bee-keepers, there is nothing better for this purpose than Naphthaline and Apicure, which should be renewed as they evaporate. All food should be medicated either with quinine or other remedy. Keep colonies as strong and vigorous as possible and headed by young queens. Where bees have died the combs may be melted down for wax, which should be used for domestic purposes only, or combs and frames, together with the quilts, should be burnt. The refuse from the extracting—"slum gum" as it is termed in America—should be burnt. I have seen boiling the quilts advocated. This, if carried out in a thorough and efficient manner, boiling for at least thirty minutes, will quite likely make them perfectly safe. But new quilts are safer, and when the cost of coal or gas, and time and trouble boiling and drying are taken into consideration they are also cheaper. The same remarks will also apply to frames. This clearing out of infected hives should be done as early as possible after the bees are dead, and it will pay to see that where colonies in neighbouring apiaries have died from disease the hives are promptly cleaned out and disinfected. A little persuasion will, in most cases, convince the owner of the necessity of this precaution, even if one has to offer to do the work for him. There is no doubt that "Isle of Wight" and other diseases have been, and still are, spread to a great extent by infected hives that are left so that healthy bees have access to them. The necessity of dealing promptly with infected hives and combs cannot be too strongly urged upon all bee-keepers. This is all one can do until we obtain the much-needed power to deal compulsorily with such cases.

No doubt, after reading this, the majority of bee-keepers will say or think that there seems very little one can do to prevent "Isle of Wight" disease, and so far as our present knowledge of the disease goes there is very little. But having done this little you will have the satisfaction of knowing that should the disease appear you have done your best to prevent it.

J. Herrod-Hempsall.

SUFFOLK BEE-KEEPERS' ASSOCIATION.

An invitation social dance for the naval and military quartered in the district was promoted by the Suffolk Bee-keepers' Association at the large hall of Ipswich Co-operative Stores on Wednesday evening, May 12th, and through the generosity of patriotic members the gallant fellows enjoyed themselves immensely. Representatives of the Suffolk Yeomanry and Infantry, Royal Field Artillery, Hon. Artillery Company, Royal Army Medical Corps, and last, but not least, several gallant lads in navy blue from Shotley, including a flying man, footed it until eleven o'clock with energy and zeal.

There were about 150 present, including Miss Elsie Cobbold and the chairman, Mr. J. B. Chevallier, of Aspall Hall, who

came prepared to make a recruiting speech, but the necessity for this ceased when it was seen that the young men of military age in civilian clothes were conspicuous by their absence, proving, as it undoubtedly did, that they had obeyed the call of duty and joined the colours.

During the evening Mr. Cyril Cullingford, with Miss O. Lebeda, gave a ludicrous parody on "Excelsior," which convulsed those present, and later Miss Lottie Storey gave a beautiful rendering of "The Garden of your Heart," earning well-merited applause. All these talented artistes gave their services freely for the cause. Taken altogether it was generally regarded as a gleam of sunshine in a wintry sky, and the purpose of giving a little pleasure to others was easily achieved and will be long remembered. Messrs. Lansdell's band provided excellent music, and the hard-working hon. secretary, Mr. Oliver C. Jones, acted as M.C.

THE SEASON.

The season, which up to nearly the end of April was the most backward known to us for many years, bids fair now to be one of the most forward. An old man tells me that he has never known growth so rapid as in the first week of May. I see everywhere signs that we have more than caught up to the rather early level of last year.

As a matter of fact, there is never so much difference between early and late seasons in May as there is in March and April. To take a few typical blossoms we shall see that the earlier the blossom the greater the extremes between early and late years.

Flower.	Earliest.	Latest.	No. of days between earliest and latest.
Gooseberry	Mar. 12 ...	Apr. 20 ...	39
Blackthorn	Mar. 12 ...	Apr. 14 ...	33
Butterbur	Mar. 26 ...	Apr. 29 ...	34
Sycamore ..	Apr. 18 ...	May 6 ...	18
Apple	Apr. 27 ...	May 9 ...	12

Gooseberry, blackthorn, and sycamore have observed with me nearly, if not quite, their latest dates this year. Apple was not quite so late, say May 4th, which is just about its mean date. The raspberry's mean date is May 23rd, and I confidently predict that it will come this year earlier than that. The date for white clover is exactly the same as for raspberry, in Blomefield's calendar. By the time this appears in print, we shall be on the brink of an early honey season, and not the late one that seemed likely when April was nearly out.

The late birds are early this year, the swift appearing with the swallow instead of twenty-three days later. I saw the turtle dove on May 3rd, its mean being May 8th. There were even April swarms, as THE BRITISH BEE JOURNAL testifies. With our late flowers and our early ones all out together we ought to have a fierce honey-flow running from apple to lime without a break.—G. G. DESMOND, Sheepscombe, Stroud, Glos.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

BEES IN INDIA.

The following letter and photograph, received from India by the Rev. C. H. Murray, has been kindly sent to us for publication. It will, no doubt, be very interesting to our readers:—

Jullandur,
India.

This photograph of a "Ficus Sacra," or peepul tree, covered with swarms of bees, may interest you. It is in my garden, some way from the house, luckily. However, the bees are quite peaceful, in spite of having had all their honey taken the other day by a brave man. There are twenty-one swarms, and they have been there a month. Alanddin, my bearer, says the hero in question recites charms (mantra) to keep the bees quiet. He covered his head, but left his legs bare—so either his charms, or the skin of his legs, must have been very strong. I didn't see the operation as it was done at noon, when I was in Court. But my neighbour watched it. The man, who is a Moghal by caste, swarmed up the tree, armed with a small earthen pot and a long string. He brushed the bees

off their combs, and broke off pieces, which he put into the pot and lowered down to his pal below, who had a small fire burning. This was in order to stupefy the bees, I suppose, though the swarms were thirty or forty feet from the ground, and there was not much smoke. So I think it must have been the charms after all.

He got 30lbs. of good honey, gave me half, and kept half for his "pains"—if any. It is quite nice honey. This morning I tried some porridge flowing with milk and honey, and found it an excellent mixture. I never had a very clear picture of Canaan: but perhaps the two ingredients were not necessarily mixed in that description of fertility.

SWARMS OF BEES IN "PEEPUL TREE."

QUEEN REARING AND INTRODUCTION.

(*Continued from page* 160.)

By studying the illustrations in Fig. 10 the beginner will be able to form some idea of the age and condition of a queen cell from outward appearances. No. 1 shows the thinning down of the point of the cell which is carried out by the workers a few days previous to the time the princess is due to emerge, so that she may bite through with little effort. They rarely thin down as far up the cell as in this particular specimen; generally doing it just at the tip, as in No. 2. When this thinning is done the cell is termed a ripe one, which means that the princess may come out any minute. The surfaces of queen cells are not always alike, some have the depressions more defined than others. In No. 1 they are seen very clearly; at No. 2 they are only slight, while at No. 3 they are very pronounced. This cell has just been vacated, and shows the lid remaining hinged to the cell, a peculiarity which occurs only with queen cells. To ascertain if the

princess has been properly matured cut open the cell. If a residue about half the size of a pea, and the colour and consistency of calf's foot jelly, remains (as at No. 4), it indicates that she has had more than enough food during her growth in the cell. If no residue remains she should be destroyed, as it is possible she may

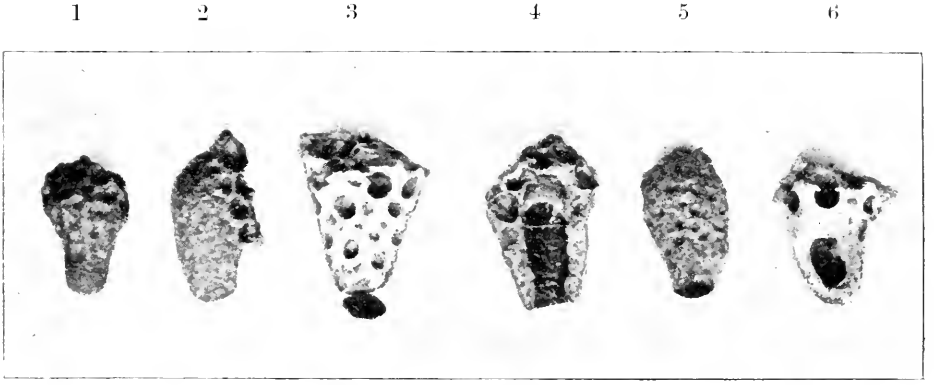


Fig. 10.

not have had sufficient food, and if she has been starved ever so little she will not be up to standard. No. 5 shows a cell from which the workers have removed the capping, previous to cutting it down; while No. 6 illustrates how the first princess

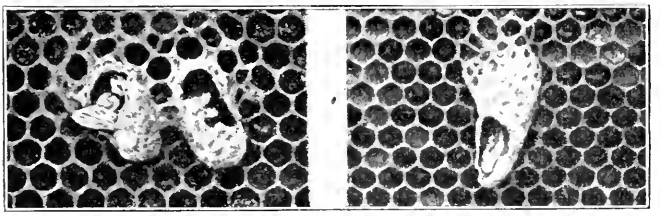


Fig. 11. Fig. 12.

out, if allowed, will tear down the wall of other cells containing her royal sisters, so that she may destroy them. This is seen better in the photograph (Fig. 11), which was taken before the dead bodies were removed. There is a great

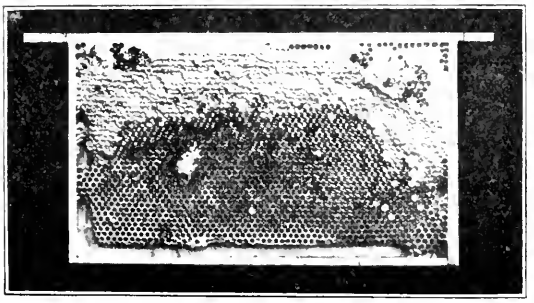


Fig. 13.

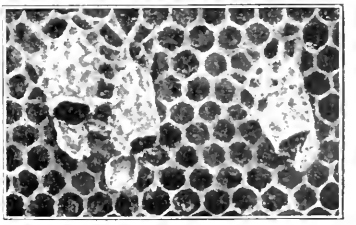


Fig. 14.

deal of difference between the opening made in the cell by a princess to kill a rival and the tearing down of queen cells by workers, which happens when swarming is delayed by unsuitable weather; this is shown at Fig. 12. The edges of the opening

are more regular, and the princess is less developed. At Fig. 13 is seen a vacated cell in the process of being cut down by the workers, so that the material may be utilised elsewhere. In this case they work regularly round the edges instead of beginning at the side. When the bees intend to throw a cast, instead of the first princess out being allowed to kill the others she is prevented, and all are allowed to emerge as seen in the group, Fig. 14, which were all vacated within five minutes of each other.

(*To be continued.*)

PRESS CUTTING.

A PLEA FOR CANE SUGAR.

Now that the importation of German and Austrian beet sugar has been suspended, the maintenance of an adequate supply of sugar at a reasonable price from other sources has already become a question of national importance. It has been urged that we should at once begin to cultivate sugar beet in large quantities and that refining factories, aided or owned by the State, should be established in England. Against these suggestions for the production of British beet sugar, I would ask for a thorough consideration on the part of the public and the Imperial Government as to whether it would not be better, both for the British consumer and for the trade of our great Empire, to turn our efforts to more fully exploiting the vast resources of the Empire to produce an increased supply of cane sugar to make up the deficiency.

Up till the middle of the nineteenth century practically all the world ate pure cane sugar. It was the chief product of our West Indies. India and the East Indies exported it in large quantities. Vast areas of our Empire in Asia, Africa, and Australia are the natural home of the sugar cane, yet we have allowed the cheap, inferior beet product from Germany and Austria to force its way into our homes and strangle our sugar industry.

We possess, for instance, in India alone an almost unlimited capacity for the production of cane sugar. In 1912-13 the world's output of cane sugar amounted to 8,648,810 tons, of which India produced nearly one-third. She normally consumes all she makes, and imports largely in addition. In the yearly report ending March, 1913, she had imported 617,500 tons of cane and 57,000 tons of Austrian beet, but in 1911, owing to the failure of the Continental beet crops, Great Britain imported from India 650,000 tons of cane sugar. In 1913 the total area under sugar in India was 2,370,000 acres; this is a great decrease from the palmy days when India, "before her sugar industry was ruined by the bounty-fed beet sugar of Germany and Austria, produced half the sugar of the world"; now thousands of acres of the old sugar plantations are out of cultivation and she has lost her export trade. ("The Feudatory States of India," Sir Roper Lethbridge in the *Asiatic Review*, February, 1914.) Bengal, Assam, the United Provinces of Agra and Oudh, Punjab, the North-West Provinces, Bombay, Madras, and Sind are all sugar-growing provinces, and with the adoption of modern scientific methods could produce an almost unlimited supply. Java, where no money or skill has been spared to bring the manufacture of sugar to the highest pitch of excellence, is able to hold its own against all cheap beet rivals. In 1910 Java exported 1,182,653 tons of sugar.

The most suitable soils for sugar growing are open clays and loams; the yield varies with the locality. In Java the crop is alternated with rice and beans, and averages from thirty to forty tons an acre. The West India crop is from twenty to thirty tons an acre, while Hawaii, with its deep volcanic loam assisted by irrigation, reaches the extraordinary output of one hundred tons an acre. Egypt used to produce large quantities of high-class sugar, and now grows about 49,403 tons yearly. Natal is climatically able to provide the whole of South Africa—which imports nearly 100,000 tons—with sugar of high quality, but in 1912 she only produced 106,000 tons. Australia again has vast areas suitable for sugar production. The Commonwealth Government encourages the sugar industry, and with an increased overseas demand for pure cane sugar both Australia and Natal could develop their sugar trade with great advantage.

Cane sugar is not only an essential food for the blood; it has strong antiseptic qualities in its crystalline form, and is undoubtedly the purest, most

wholesome, and, from all points of view, the most desirable form of sugar. Over 88 per cent. of refined sugar is produced from the raw. Cane molasses are far superior to those of beet. "From 20 to 30 per cent. of the impurities present in cane sugar consist of sugar which has been changed in the process. The sweetening capacity of this sugar is almost equal to crystalline cane sugar, and commands a definite market value. But beet molasses, on the contrary, are charged with impurities of a highly complex organic and inorganic nature, and have a fusty smell and nauseous, bitter taste." (Mackintosh, "The Chemistry of Sugar.") The character of the beetroot prevents perfect refinement, consequently there is present in the sugar "non-saccharine matter which cannot be removed by the process of sugar-making."

Every discerning housewife knows that cane sugar, for its sweetness and purity, is far preferable to beet, and, at least for "high-class cookery," such as delicate preserves, conserves, cakes and sweets, &c., demands cane, and will use no other. Beet sugar, when boiled, gives off a dirty scum and disagreeable smell; its apparent cheapness is fallacious, since far more is required than of cane. It has long been recognised that beet sugar is unwholesome for bees, and amateurs are always warned against feeding their stocks with it; in this connection the British Beekeepers' Association has done splendid work in bringing pure cane sugars at a moderate cost to the notice of the public.

Great Britain consumes 91¼lbs. of sugar per head yearly, and though she owns the best sugar-producing countries of the world has been dependent on the inferior German product for her chief supply.

It is, therefore, for the reasons above stated that I would urge in this present crisis the reorganisation and fuller development of our existing cane-sugar industries—putting within the reach of all, and at a moderate cost, the *best* sugar obtainable—rather than the experiment of making beet-sugar in England.

The war has cut off the supply of inferior sugar; it gives us a unique opportunity to reinstate the best—our imperial cane sugar.—From the *Westminster Gazette*.

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	26	13	9

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 29th to July 3rd, at Nottingham.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretaries, 23, Bedford Street, Strand, W.C. **Entries close May 31st.**

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

Bee (Parkstone).—*Medicating Syrup with Quinine.*—(1) Dissolve 60gr. sulphate of quinine in ½oz. of water to which has been added 2 or 3 drops of sulphuric acid. Add this to each gallon of syrup. You can get the quinine ready dissolved from dealers in bee appliances. (2) Once a day.

"Ant" (Wexford).—*Re-queening.*—You must remove the old queen before placing the cage containing new one in position.

"Ant" (Ballyboy).—*Improving Honey.* No; it may be done by mixing strongly flavoured honey with some that has very little flavour. Both should be of the same density and be warmed before mixing.

A. Greig (Fordoun).—We cannot say without more particulars as to why she was unsatisfactory. As you did not give her any air or enclose any workers with her she was dead on arrival.

Suspected Disease.

Baker's Dozen (Yorks.).—(1) "Isle of Wight" disease. (2) We cannot say, possibly a few days, or it might be some weeks.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS.

SECOND class expert required to take charge of small apiary, able to instruct and lecture if necessary, one with knowledge of poultry keeping preferred.—Apply, stating age and experience to Box XX., "B.B.J.," 23, Bedford-street, Strand, W.C.

FOR SALE, a few swarms at 15s. and 13s. each, also second swarms at 9s.—T. BRADFORD, Expert, Upton-on-Severn, Worcestershire. v 61

BEES advertised previously sold out: applicants kindly accept this as reply.—TOM R. WALL, Beeley, Rowsley, Derbyshire.

HEALTHY stock on 8 Standard wired frames, 25s. free on rail; no "Isle of Wight" in district.—BURN, R.O., Whitby. v 64

20 SHALLOW frames, drawn out combs, drone comb, 3d. each; selected clear, large queen rearing outfit, Swathmore; also various list appliances.—HORN, Bedale, Yorks. v 63

APIARY, near Tunbridge Wells, for sale, wintered, 8 bar frame hives now increased to 14 by May swarms.—KIRSTEN, Southborough, Tunbridge Wells

WANTED, pupil-assistant on 14 acre fruit and bee farm, must have some previous experience, salary according to ability, references given and required.—Apply, PROPRIETOR, Overbury Fruit Farm, near Tewkesbury. v 60

5 FRAME nuclei, Simmins' immune strain, brood in all frames, 15s., guaranteed healthy, boxes to be returned.—A. MAGSON, Kirkham, Lancashire. v 59

ANOTHER batch of fine 1915 British queen bees now ready, healthy; particulars, stamp.—CROWE, Stawell, Bridgwater. v 57

SECTION racks, Lee's pattern, new, 1s. 3d. each. —FRASER, 13, Manse-road, Markinch. v 56

FOR SALE, good extractor, 8 W.B.C. pattern, 6 other hives, 60 shallow drawn out, other requisites.—TAYLOR, Schools, Great Amwell, Ware, Herts. v 55

SWARMS for sale, 15s., carriage free in non-returnable boxes.—NORRIS, Cashel. v 54

TWO good stocks of bees, 1914 queens, owner enlisted, 25s. each, or first near offer.—LEECH, Newland Park, Hull. v 53

FOR SALE, 8 stocks of bees, strong and healthy, in 10 bar frame hives, three racks and lifts complete, 30s. each.—DURRANT, Freston, Ipswich. v 52

EXTRACTOR, 2 Standards or shallows, ripener, cwt., both new condition. 18s. f.o.r.—SCHOOLMASTER, Aston-Bampton, Oxon. v 51

TWO 28lb. tins medium extracted honey; also sixty well filled sections; what offers?—TROTTER, Shadwell, Leeds. v 47

BEES.—Strong stocks English, on wired standard combs, healthy, 30s. each; travelling boxes returned paid.—BLAKE, Church-street, Ilfracombe. v 46

WANTED, honey extractor, perfect condition; state make, price, willingness approval.—WATSON, Post Office, Staplehill. v 40

SWARMS for sale, healthy, natural swarms; May, 12s. 6d.; June, 10s.; boxes returnable.—C. LYNCH, Sgt. R.I.C., Killamary, Windgap, Co. Kilkenny, Ireland. v 39

SWARMS from Standard hives during May and June, 15s. cash with order.—J. REAVELEY, Starbeck, Harrogate. v 33

FOR SALE, swarms from bar frame hives, until May 20th, 18s.; after, 15s. 6d. each; second swarms, 11s.; guaranteed healthy.—A. WILKIN, Pymoor, Ely, Cambs. v 21

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

HAVING obtained larger ones, will sell small treadle grindstone, 10s.; also a Green's 10in. lawn mower, 8 knives, and grass box, 25s.; both in excellent condition.—HERROD-HEMPSALL, Apiary, Luton, Beds.

FOR SALE, ½ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, cloth bound copy "Bee-Keepers' Record," Vol. 7, year 1889.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, 60 stocks of bees without hives; many just imported from the Island of Jersey, where disease is unknown.—Particulars from Manager, BRITISH BEE JOURNAL.

MOVING apiary, must clear, three cases each 1,000 Lewis's sections, 21s. per case; twenty racks extracted shallow frames, clean, 5s. doz. frames; racks 1s. extra; twenty empty section racks, 1s. 3d. each; fifty W.B.C. hives, complete with lifts, 10s. each.—E. F. J., "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

WILKES' free-way excluder and non-swarming method have resulted in enormous takes of honey; sample excluder, 2s.; illustrated work explaining prevention of swarming, with many photos, 1s. 1d.; send for 1915 catalogue, all post free.—WILKES, Four Oaks, Birmingham.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 6s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

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HELP ONE ANOTHER.

We had a short article under this heading late last autumn, and we have been pleased to know that in many instances bee-keepers have come to the help of those of the craft who have joined the Army, by either attending to their bees or giving advice to the person left in charge. But there is still plenty to do in that direction, and there is no doubt it will be done cheerfully without fee, or other reward than knowing a little has been done to help on the cause of our country.

There are possibly other ways of helping our fellow bee-keepers who, though not actually serving in any of His Majesty's forces, are hard hit by the war, and it should be a pleasure to prove that the goodwill said to exist among bee-keepers is a reality. A paragraph in one of the daily papers brought this to our mind the other day. It was to the effect that the people in the Isle of Man were likely to suffer considerable loss, as for various reasons there would be few visitors to the island this summer, and a great number of the dwellers in that beautiful spot depend on visitors for their means of livelihood. The thought at once occurred, "How will this affect friend Horsley?" The holiday season is almost here, and if any of our readers are so fortunate as to be able to spend a holiday over there, they will receive a bee-keeper's welcome from Mr. Horsley at Merridale House. If a voyage out of England is not possible, a friend may be going who will be pleased to know of a good place at which to stay. Those of us who cannot get so far away may know of others, in our own health resorts, watering-places, &c., who would be only too pleased to receive fellow-bee-keepers as "paying guests."

Quite likely other methods of giving a helping hand may suggest themselves, and if they do there should be no hesitation in carrying them out. Remember, "every little helps."

AN APPRECIATION.

May I take the opportunity of thanking you for the valuable information received out of your book on "Preparing and Producing Honey, &c., for the Show Bench." Although only a novice I obtained first prize at our County Show, viz., the Gold Medal, the first time I exhibited, and various other prizes the same season. The value of your book to exhibitors cannot be estimated. You are at liberty to use this as you choose. Wishing your valuable book every success.—JAMES HICKMAN.

EXTRACTS FROM AN EXPERT'S DIARY.

By J. Herrod-Hempsall.

Experts will now be busy touring in the various counties, and some good folk will imagine they are having a nice holiday. I have many times been told when on tour or during a brief time—usually one week-end in three months—at home that I must be having a good time cycling round the country and seeing all the sights and show places. I am afraid if anyone undertakes a tour with the idea that it is only cycling round the country and having a high old time they will be mistaken. There is certainly plenty of cycling, and, of course, sometimes one drops into a place that is either historically or in some other way interesting, and where the usual tourist does not penetrate. Again, lovely views burst on the vision, and one must perforce dismount and indulge in a few minutes' rest to gaze out perhaps over miles of country, or up some rocky gorge down which a mountain stream is splashing, while overhead fleecy clouds now and again hide the tops of the mountains. In the early spring, and one year even in May, I have watched the distant mountains, looking bare and brown, blotted out by a heavy driving cloud. When this has passed a transformation has taken place, and one could almost imagine a gigantic whitewash brush had been passed over the mountain tops, for they were now white with snow. In an hour or two the snow has nearly disappeared, and there has then been another huge sweep of the brush. In time one almost gets to take the varying landscape as a matter of course, and bends all one's energies to the task of getting from one apiary to another; the expert unfortunately cannot choose his road. A bee-keeper lives out in the wilds, perhaps among the hills, necessitating a ride for miles over roads that in the map are marked as not suitable for cycling, and would be shunned by the cyclist "on pleasure bent." At the end of the day what with the fresh air and the riding the touring expert is ready for a rest, and never suffers from insomnia. The morning's post brings letters, some from the secretary to say "Mr. A. (at the other side of the county) wants to see you as early as possible; there is a new member at Blank (a place

one passed through the previous day); and unless Mr. B. has a visit this week he will resign." Then there are letters to answer, and notices of your visit to send out. I was almost always too tired and sleepy to do this at night, and when attempting it have "dropped off" before I could finish, and quite likely made mistakes in what I have done. On one occasion I addressed, stamped, and posted a batch of post-cards without filling in the item of day of visit.

One old gentleman in Essex was very "touchy" if the expert was not there just when he was required. He always paid for any extra work, but seemed to be under the impression that the Association existed for his particular benefit. It will be readily understood that the effect of these things, especially on one not yet accustomed to them, is to make him strain every nerve to get on. He will ride as fast as possible and ride up hills where a prudent man would walk, and unless the pace is moderated the results are likely to be disastrous. Many a man is now paying the price of over-exertion at cycling, running, &c., in his youth. In my own case I began to have unpleasant sensations with my heart towards the close of one tour, and I therefore consulted my doctor. After a brief examination he said: "Um, ah, you've overstrained your heart a bit, and have got a touch of 'cyclist's heart,' or, if you had been running, we should call it 'runner's heart'; in short, it is 'athlete's heart.'" It is not bad; you have come in time, and I think I can soon put it right, but you must knock cycling off for the present." I thought that looked like an end to my career as a "touring expert," but after consideration decided to purchase a motor cycle for the next tour. My finances would not permit the purchase of a new one, and even second-hand machines were a good price at that time. However, I eventually purchased one, which, though it turned out a "croek," and gave me some hard work at times—it is no joke pedalling a motor cycle for a few miles, even though it is a light one—answered the purpose, and I have, with care, had no serious return of the heart trouble. At that time petrol was not to be procured at every village, and magneto ignition, free engine, and variable speed gears were not invented. Accumulators I found had a disagreeable habit of "running down" when least expected, and one that should have run for 150 miles was ready for re-charging after 20. I therefore took to carrying a couple of spare ones, one in the tank and one in my basket. At first it was often a difficult matter to find out what was wrong when the engine would not go, but after a time I got so accustomed to it that I could locate the trouble almost at once. I do not know how things are on the road now, but I was particularly struck with the kindly offers of help I used to receive from other motorists when something had gone wrong and I was busy "tinkering" by the side of the road, and more than once I have been pushed or towed a few miles when petrol or accumulators had run out. I was fortunate in not having many accidents, probably owing to my "bump" of caution being well developed. The two worst I had were caused by dogs, both big black retrievers. In the first case the dog was not altogether to blame. I had just "topped" a hill near Wivenhoe, when I noticed a man driving a heavy cart meeting me and a retriever dog on my side of the road. Being afraid that it would get in the way the man called the dog, but unfortunately it had not been trained to obey with military promptness, and started across just as I got to it, with the result that the front wheel of the cycle struck it full in the ribs. The handle bar turned in the socket and down I came; total result; lamp and horn smashed, front wheel slightly buckled, forks bent, trouser knee torn, and knee bruised and stiff for a week. I was able to wheel the machine down into Wivenhoe and get it fixed up again. The dog had disappeared, so he was not much hurt. The second occasion was near Grays. I had dismounted at a cross road to inquire my way, and on remounting had barely got into the saddle when a dog rushed barking at me from a butcher's yard. I was completely taken by surprise—so was the dog. I came down on him so suddenly that I did not have a chance to switch the engine off, and as the back wheel lay clear of the ground the engine ran for a few seconds after falling. The engine pulley was on the dog's side; some of his long, curly hair was caught under the belt and pulled out, to his discomfiture. He struggled clear, and scampered into his yard again, where he stood barking at me. On these occasions dogs never seem to get hurt. A friend of mine once had his motor car upset into a ditch by one, which five minutes after pursued and caught a rabbit just over the hedge. My casualties this time were pedal and pulley wheel smashed and horn damaged, and, of course, trousers torn. I presented the bill to the owner of the dog, and he paid it without any demur, pleased, I expect, to get off so cheaply.

In both these accidents some of the acid was spilled out of the accumulators in my basket. This destroyed some of my papers, and eventually necessitated a new basket. I got the most thorough

drenching I think I ever had when out on this machine. I had made Saffron Walden my centre, and had been out some twelve or fourteen miles. Just as I started the return journey rain began to descend. The "make and break" on the cycle had no guard, and water or sand were continually getting between the contacts and causing a short-circuit. Eventually everything was so saturated that the electric current was dissipated before it reached the sparking plug. I could get a distinct shock through the insulation when I took hold of the high-tension wire, and I had to remove the belt and pedal; fortunately the road was fairly level. By the time I reached Saffron Walden I was thoroughly drenched. The landlord of the Abbey Temperance Hotel, where I was staying, kindly lent me some clothes while my own were drying, and after a hot bath, a supper of hot bread and milk, and a night's rest, I was none the worse, but it took me the greater part of next day to clean my machine and persuade it to work again. I had one other rather rough experience riding from Saffron Walden to Luton at the conclusion of a tour. The trouble this time was with the back tyre. I had some time previously had the inner tube burst, and trouble began soon after starting about 6 o'clock one evening. The patch came off. How many times I endeavoured to get that patch to do its duty that night I cannot say. About 8 o'clock I came to a cycle repair shop, but the youth had given over work and couldn't be persuaded to try what he could do; he would do it in the morning, but I was not in the humour to put up for the night to suit his whim, so I walked on. I made several more attempts to get the patch to stick, and, as a last resort, cut the tube and re-jointed it; but even that was of no avail, stick it would not, so there was nothing for it but to jog along as best I could, walking until I was tired, and then, reckless of the wheel spokes, riding down a slope, eventually landing at the W.B.C. Apiary at 3 o'clock in the morning. Before starting for home I again tried to mend the tube, and thought I had made a good job of it, but it only carried me thirty miles, and I had to get a new one. I was told that when the rubber becomes old the solution will not adhere to it, and this, I think, is correct. When the tyre became warm with riding the joint gave way.

I did not venture to take the old motor into Lancashire with me. Essex is supposed to be a flat county. It is in some parts, and maybe as a whole, when compared with the Tors of Devon and the Pikes of Lancashire, but if anyone undertakes to tour Essex under the impression that there are no hills he will be disillusioned when climbing up Laindon or Danbury hills, or riding along the western part of the county from Chesterford to Saffron Walden, Bishop's Stortford, and Harlow. My cycle engine was not powerful enough to take me up many of these hills without help, and very often the combined efforts of the engine and myself were unavailing, and I had to walk and push the machine. If that was the case in flat Essex what would it be in Lancs? I could not afford a new motor, as the salary of an expert is never high enough to enable him to save much. I had to fall back on the "push and go" cycle, which has carried me thousands of miles, and over perhaps some of the roughest roads in the country. Having learnt wisdom in the school of experience, I have not overdone the cycling part of the work, have been content to see other cyclists shoot past me on the level, and have walked up hill whenever the extra exertion began to cause distress, and have thus kept myself fit. The work of a touring expert, as will be seen from the foregoing, is not all "beer and skittles."

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOTES FROM DURHAM.

[9141] I commenced bee-keeping about nine years ago and have had fair success, although there have been ups and downs intermixed.

There were no other craftsmen in the district when I started, but now we

muster six members, with a total of ten good stocks to commence spring with.

During the past winter we had a meeting and decided to form a small society of our own and buy our materials on the co-operative system, and you may be sure we derived a very great benefit from it.

We have had some pleasant meetings, and amongst other matters brought up for discussion was a proposal that during the spring and summer evenings our meetings would be held at each other's gardens, and examinations be held of the stocks so as to prevent the entrance of any bee disease in the district.

This country is a very late one on the east coast of the county of Durham, and warm days are not very plentiful throughout a year. Nevertheless, I managed to finish up last year with four good stocks for myself—three I gave away—and 130lbs. of honey in sections, and another of my friends—a new beginner—got 42 sections off his one stock. All our colonies have last year's queens.

We do no feeding, as we are of opinion that much of the existing disease arises from a desire on the part of bee-keepers to work contrary to the natural methods of the bees.

We do not keep bees for a living, of course, or we would have to do as others have done. Our seasons are simply the flowers of the field. Some years clover is good, and others there is a little charlock. There are no fruit trees.

The strain of bees we have originally came from Ireland, and one of our members had a last year's swarm in a wooden box given him, which we are transferring to a frame hive, and from this we hope to cross with our own strain.

Two of us made a hive to our own pattern this year, which we think is more suitable to this cold place than the lighter class used further south, and we were so pleased with it that we had another four made. The inside measurements are, of course, to the standard. A gentleman friend of mine who lives some distance away was so pleased that he offered me 25s. for one, and you may guess I struck a bargain.

One of our members got his bees through a swarm belonging to another member taking possession of an old hive he had standing, a relic of history of long ago. very well agreed.

How said it is that the war has come and upset the world! Perhaps it would interest you to know that we saw the bombardment of the Hartlepools. The German ships were quite close to us, but probably they did not think it worth while to have a shot. There is a large colliery here and the pit heap would have made a good target. As a pyrotechnic display the sight was fine but for the resulting loss of life.—F. N. Neyrond.

IZAL AND "ISLE OF WIGHT" DISEASE.

[9142] I hasten to inform your readers whose bees are affected with "Isle of Wight" disease of the very striking results I have had in my treatment of my bees, about which three or four weeks ago I felt I must lose the lot. I cyanided two lots, one on April 22nd, the other on May 1st. I had tried sulphate of quinine and also cinnamon essence without any good effect, and I still saw many bees crawling here, there, and everywhere, and one hive seemed to have it badly. About a fortnight ago I started spraying the alighting boards and entrances with a solution of Izal, using for the purpose a bicycle pump, and holding my finger at the orifice so as to make and direct a very fine spray. To-day there is not a single crawler to be seen, and the hive mentioned above seems to have quite recovered and will have sections on in a day or two. The other hives are rapidly gaining strength.

I am now hoping that I shall get a surplus, though this district is not so good as that which I was in at Brent Pelham, where, you will remember, you came to give us lectures.—(Rev.) Hubert Newman.

AN EARLY SWARM.

[9143] Being a constant reader of your valuable paper I have been interested in reading the account of early swarms. I have been fortunate to get a very early swarm on April 28th, which weighed 6lbs.; I placed it in a new bar frame hive with twelve frames and full sheets of foundation. All the combs are drawn out and full of brood from front to back; I have placed on them a super of eleven shallow frames, and they are well on with them, the centre combs being drawn out and contain honey.

On one of my old stocks I placed a super of shallow frames late in April, with full combs, saved from last season after extracting, and on May 24th extracted from them 11½lbs. of extra thick honey of very fine flavour. The bees are Italian

stocks. I should like to know if this is a record among bee-keepers. Wishing your journal continued success.—W. A. Woodford.

A NOTE FROM FIFE.

[9144] I venture as an old reader of your valued paper to send you this. I am perfectly certain there are few people who have a worse place to keep their bees than I have. They are exposed on every side, and the cold winds off the sea must kill a good many. I have them at Carnoustie, and went over the other day to see how they were getting on. Despite the terribly bad weather the hives had every comb covered with bees, and in one they were so crowded out that they had built two large combs between the brood-box and outer case and filled them with honey. I thought this might be of interest to you.—Kenneth Y. Stuart.

A PROLIFIC QUEEN.

[9145] On May 15th last year a small lot of bees came into my garden, which I secured (I had in the previous year lost my forty-eight lots with "Isle of Wight" disease, so I was very pleased to get going again). My new arrivals were Italians and covered about four frames. They did remarkably well, giving me about 80lbs. of surplus. On the 5th of this month they sent out a topping swarm (covering all ten frames); on the 17th the first cast came, on the 19th the second, and on the 24th a third lot, and these were not mere handfuls of bees, but useful lots covering four to five frames each, and to crown all, to-day (May 29th) the swarm which I hived on the 5th sent out a swarm—they had filled eleven frames in the brood chamber and nearly finished a rack of twenty-one sections in just over the three weeks, and they are now practically boiling over with bees. Is not this nearly a record? The funny part of the business is that bees are swarming so much earlier this spring, and the season is so much later. There must be some reason for this.—Wm. S. Halford.

THE MANUFACTURE OF SUGAR.

The process of "sugar-making," in its essentials, is a simple enough matter of cookery. The first care of the producer is to get all the sugar possible out of the cane or grass or root, either by squeezing out the juice or washing out the sugar, the sugar-maple saves the sugar-maker this trouble, delivering the sap ready for the boiler. The juice is then cleared of its impurities, as coffee is cleared by the white of an egg, or water is filtered through charcoal; it is then boiled, to evaporate as much of the water as possible, and crystallise the solid sugar; it is then cooled, and the molasses drained off, leaving the soft dark sugars, in which each crystal has its thin coating of molasses, or dried by a centrifugal machine, as clothes are dried in the whirling drier, whence the water flies out, or further clarified and left to crystallise in white loaves, which are sawed or crushed or ground or powdered into the several varieties of fine white sugar. Most of these earlier processes are performed on the plantations, but in many cases they are repeated and the sugar carried through the final process in the great refineries. "Refining," is, in fact, little more than a finer repetition of the processes of "making," and to do these simple things on a great scale and in the best way is the sole purpose of those enormous hives of industry.

The sugar planter requires for his cane plantation a warm, moist climate, with intervals of hot, dry weather, with little danger from frost; a soil not too rich, containing lime and magnesia, and of good drainage; and the benefit of sea-breezes, salt in the air being better for him than salt in the soil. The sugar plantations of Louisiana find these conditions in the alluvial soil of the lower Mississippi Valley. In laying out an estate, drainage must be carefully provided for, and in some countries irrigation is much used. From one to four cuttings are set out together in holes about two feet apart. As the canes grow they must be well weeded and "trashed," *i.e.*, all dry, dead leaves removed. They begin to grow in Louisiana in February, and are harvested from October to January. After the first cutting of the new plants the stole or stool left sends up another growth of cane, called "ratoons," which with each cutting grow smaller in size and closer in joints, and are said to yield sweeter juice and finer sugar. The one planting will last many years, but Louisiana sugar-growers reckon only on three years' product, planting a third of the sugar ground anew each year. Rats, white ants, lice, "borers," and some minute animals producing "rust" and "must," fight against the growing plant, as also do wind and frost. When cutting-time comes, the cane is cut with a hatchet close to the stole, the top is chopped off, and the leaves stripped; the canes are then bundled up and carried to

the mill, often, on the large plantations, on narrow donkey railways, or placed in windrows, on the fields, so that the juice may not ferment until they can be handled.

The cane is ninety per cent. juice, and the juice contains about fifteen per cent. of sugars, so that a hundred pounds of cane hold about thirteen and a half pounds of sugar. These figures vary greatly, however, with the variety of cane and the character of the season. The Otaheite cane, requiring a much longer hot season to ripen it, and therefore grown only in the tropics, contains a much larger proportion of juice, much richer in sugar, than the Bourbon cane, commonly grown in Louisiana. It is seldom that as much as half of this sugar is utilised. The Magnolia Plantation has indeed produced 163¾ pounds per ton, but the average for Louisiana was, with the vacuum process, 130 pounds, by other processes 87 pounds, per ton of cane.

The sugar-maker's first aim is to get from the cane as much of its percentage of juice as it can be induced to give up. The juice is enclosed in little cells of lignose, or woody fibre, which make the other tenth of the cane's weight. There are three ways of extracting the juice—by crushing, by soaking out the sugar by the process of "diffusion," or by a combination of crushing and of maceration in water. Crushing or grinding the cane is a process in use from the earliest times, as is seen in the primitive sugar-mills of the East, which consist of the hollowed stump of a tree, within which is a grinding pestle worked by oxen treading their round, driven from the arm of the bar by one man, while another feeds in pieces of cane, one by one, and takes out the crushed remains. A mill almost as primitive as this is still in use in Arkansas.

The sugar-house on a great plantation is a large, high building, the centre of the farm, to which roads or tramways lead from all directions. As a load of cane comes up, it is fed upon an endless belt or railway, which carries it up slowly to the crushing-mill, an affair of simple construction but of enormous power. The crushers are great rollers of cast-iron, in pairs or triplets, sometimes one set, sometimes more, working at a pressure of from fifty to eighty pounds to the square inch, and so arranged as to give slightly before any extraordinary strain. There are all sorts of opinions as to whether it is better to crush rapidly or slowly, and to crush once only or to repeat the operation with increasing pressures. The juice flows from the crushers in one direction; the residual cane, now known as "begass," is carried off in another by an endless belt, to be used either for dressing for the cane fields or as fuel in the heating processes which the juice is next to undergo. One of the great improvements in modern sugar-making has been the development of furnaces which get most of their fuel from the begass.

There have been several attempts to extract a greater proportion of juice by purely mechanical means, as by defibrators, shredding the cane into pulp, by raspers also tearing it into shreds, and by the curious press invented by Bessemer, but never much used, in which the canes were crushed endwise by a plunger working in a cylinder. Another method slices the canes lengthwise before crushing. The process of maceration consists in wetting or steaming the cane, either before crushing or after a first crushing.

The "diffusion" process is used somewhat in cane and commonly in beet-sugar making. Cane-cutters first slice the cane diagonally about one-sixteenth of an inch thick in pieces three or four inches long. These slices go to the diffusion "battery," a series of ten or a dozen tanks, in one of which the fresh slices are subjected to steaming and then to a flow of fresh water, which carries into the next tank the first extraction of sugar. The solution goes from tank to tank until it is nearly saturated, when it is withdrawn from the battery, while from another tank the now exhausted chips drop through a slide valve into begass carts below, and are saved for manure, or sometimes for paper-making. About eighty-three per cent. of the juice is thus saved.

The juice has now to be purified (or "defecated") and clarified, going first through a preliminary straining, by means of an endless sieve of wire-gauze, which lets the strained juice through into gutters beneath, and delivers the scum at the end of the machine. It is then heated in pans or steam-coil boilers to about 210degs. Fahr., "milk of lime" being added to neutralise the acid in the juice. A scum rises and a sediment falls; the cleared juice is run off by itself. An excess of lime has to be corrected by the use of acids, sulphuric or sulphurous, a delicate process known as "tempering." The liquid must then be filtered, and finally crystallised into sugar.

These processes, in the old-fashioned plantation sugar-houses, are effected by what is known as a "battery" of open pans or "taches." The first two pans are the clarifiers; below these, copper pans are set in masonry on a descending plane, the lowest of which is the "striking tache," under which is the furnace. The temperature of the upper pans is lower according to their distance from the fire. The juice is ladled from one pan to another down the scale, becoming of course more

concentrated from the greater heat as it descends, until at the striking pan it is on the point of crystallisation. If syrup from sour canes has got into the pan, producing a sticky proof, some buckets of lime-water are let in; on the other hand, dilute sulphuric acid is introduced to clear a dark sugar. Now, after six or eight hours of boiling, the *masse-cuite* (cooked mass), as the concentrated juice is called, of a reddish-gold colour, is ready for the "strike." Here the skill of the sugar-maker, standing half naked by the pan, his eye alert on the mass, must be tested. He must "strike," that is, dip off the liquid, at exactly the moment when it is ready to crystallise in the coolers. Perhaps half the contents of the pan is "struck out," or "cut." The rest is left in the pan for "doubling," or adding new syrup to make still larger crystals. Sometimes four or five cuts are made before the boiling is finished.

Most of the better plantations now use, however, the vacuum pan, which will be described as we reach the refineries. By reducing the pressure of the air, this enables the sugar to be boiled at a lower temperature, so that there is less danger of loss from burning or overheating. The "triple effect" process, very largely in use, is a combination of three steam pans, in which the pressure is less and the syrup denser in the second than in the first, and in the third than in the second, as the liquid passes continuously through the series. As the exhaust steam of one pan is used for heating another, the saving of fuel is considerable. But the vacuum processes can best be explained by making a sudden journey (on paper) from the plantations of Louisiana to the great refineries of New York, where the methods of sugar-making are repeated on a grand scale, in the most scientific manner.

The great refineries which line the water-front of Brooklyn and Jersey City are enormous piles of brick, often more than a hundred feet high, with a dozen or more rows of windows one above the other, with no pretentions to architectural show, but by their very size and massiveness making an impressive feature of the river landscape. They are contrived so as to take the sugar as it is landed, and carry it through one process after another with the least possible waste of power, time, and space, until the "shining sand" emerges purified and ready for consumption. Accordingly the refineries are alongside deep water, and at their wharves vessels of all sorts, from West Indian coasters to the great steam "tramps" that roam the world over in search of a job, may be seen, three and four together, unloading their cargoes into the voracious maw of the great cookshop. The dock presents a busy scene. Great hogsheads or stacks of bags are swung by derricks over the ships' sides, or a constant line of hurrying men bustle down the gang-planks with barrow-loads of bags. Uncle Sam has first to make sure that he gets his share in the shape of duties, and the refiner must also have a care that he himself gets what he is paying for, and that Uncle Sam does not get more than his dues. The first work, therefore, is that of weighing and sampling. Two huge scale beams confront each other on the dock, one marked "U. S.," the other that of a city weigher, paid by and representing the refiner. Each hogshead is trundled along in a hurry to Uncle Sam's scale; the chain grips it; two stout pair of arms at the other end of the lever swing it into the air; a quick eye and a quick hand note the gross weight; a sampler runs his gauge through the bung, and turns out the sample into a tin can with the others, presently to be sent on to the examiners for testing. Then the cask is turned over to the second weigher, who repeats the process on the refiner's part, and compares notes with the government's weigher. After the sugar has been turned out, one hogshead out of every three or four is weighed for "tare," and allowance made accordingly on the weigher's books.

On the wharf-level are the mixing-rooms, dark kitchens, misty and mysterious with clouds of steam, where brawny men rush about half naked on the edge of seething pits of muddy broth. The floor is sloppy and treacherous, and one shudders at the horrid possibilities of a fate which has more than once overtaken the workers at this cyclopean cookery. Suddenly there comes trundling in an enormous hogshead weighing 1,500 to 2,000 pounds. Two men, springing fiercely at it with big hammers, knock in the head, while others attach the chains from a big derrick above, which by the pull of a lever raises the cask above the open mouth of the "mixer," and dumps its contents into the steaming syrup below. These "mixers" or "blow-ups" are really great stew-pans set in the ground, heated by steam, which melt the crude sugar into a syrup, and mix together the various caskfuls and bagfuls. They are tanks made of wrought or cast iron, and inside are a vertical revolving shaft on which are the mixing arms, and coils of steam-pipe whence live steam is blown into the seething mixture. Before the raw sugar is dumped in, clear water, or "sweet water" from the washings of bags, is run in, and heated nearly to boiling. These tanks hold 3,000 to 4,500 gallons, and treat nine to thirteen tons of sugar at

a time. The heating occupies half an hour or so, during which a scum of impurities rises to the top, and is skimmed.

PRESS CUTTINGS.

THE BEE-KEEPING INDUSTRY.

The bee-keeping industry in Scotland seems to be recovering from the check it received in recent years by the ravages of the "Isle of Wight" disease. In districts which are fortunate in having suitable bee pasture, and where the stocks have not been entirely wiped out by the disease, large quantities of honey have been harvested during last summer and autumn. The season of 1914 has been favourable to the increase of stocks by swarming, and the heather, which yields the finest honey in the world, bloomed in great profusion, providing more than the average harvest of very fine quality. The writer has noticed several instances where the yield per hive has been enormous, and the fortunate ones have made handsome profits. In many cases producers have difficulty in finding a market for the disposal of their crop at a remunerative price, some members of the craft having accepted a very low figure. There should not be a great difficulty in selling all the honey produced in this country at a profit to the bee-keeper, and the writer is of opinion that the bee-keepers are themselves to blame for the present want of a suitable outlet for their surplus. The bee-keepers of Scotland are too conservative in their methods, and lack of enterprise in the matter of preparing their produce for market leaves a very great deal to be desired. The unbusinesslike and unappetising condition of much of the honey displayed for sale does a great deal towards preventing fastidious consumers from purchasing this very excellent food.

The absence of co-operation among members of the craft places individuals who live in remote parts at a great disadvantage. Bee-keepers should combine and have their interests safeguarded by a strong central organisation, which would help to secure for them the purchase of their hives and appliances on more advantageous terms, assist them in the disposal of their produce, and supply regularly useful information relating to their craft, more especially with regard to markets and the current prices of all kinds of honey.—From the *Scotsman*.

DETAILS.

Most bee-keepers will not give the necessary attention to detail about the apiary; they are ever ready and willing to do some big thing, and if the flourishing of banners and the blowing of trumpets could only accompany their big jobs in the bee line, all would be well with them. For instance, when this class of bee-keeper has simply a super of honey to remove he usually tells a lot of his friends, and with much gusto shows them how to take honey, but he never troubles to remove and scrape the queen excluder to give the bees better access to the new super he is placing in position. Such a detail as half a minute's scraping would increase the efficiency of the excluder quite 50 per cent. It's the little things which count, little jobs which generally take up only a minute or so of the bee-keeper's time. Replacing a damp quilt, scraping the propolis from the tops and sides of the frames, cleaning the floor board in spring and autumn, keeping down wax moth, wiring foundation, replacing an old comb, keeping the hive waterproof, and the inside and outside sweet and clean, feeding properly at the proper time, and scores of other little things which at the end of the season make all the difference between a big honey crop and a moderate or only small one. And, again, the additional comfort for the bees and the increased ease and pleasure of manipulation to the bee-keeper make the little jobs doubly worth doing. At most, bee-keeping does not make a big demand on one's time, so there is little excuse for slovenly methods and small profits.

HONEY PARKIN.

A most wholesome and nutritious item of confectionery exceptionally suitable for soldiers on active service, inasmuch as it is little affected by being knocked about in the post and improves with keeping, can be made as follows:—Oatmeal ½lb., lard ¼lb., butter ¼lb., sugar 2oz., ground-ginger ½oz., and honey ½lb. Warm the honey; melt the butter and lard together, and mix; add the oatmeal, sugar, and ginger, and mix the whole thoroughly. Spread in well-greased tins, and bake in a slow oven for two hours. When taken out of the oven mark with a knife into desired shapes, so that it can be easily broken when cold.—J. J.—From the *Staffordshire Advertiser*.

Extract from *Punch*, Feb. 10th, 1915:—

East Coast Farmer: "Have I really to do this wi' all my beasts, if so be as the Germans land in these parts?"

Officer: "Yes. Live stock of every description has to be branded and driven west."

Farmer: "I can see my way all right except for my bees. What am I to do wi' my bees?"

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 29th to July 3rd, at Nottingham.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretaries, 23, Bedford Street, Strand, W.C. **Entries closed.**

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	26	13	0
F. W. Watts	2	6	
	£26	15	6

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

ENQUIRER (Bearpark).—*Drones Cast Out.*—It is not usual for the drones to be cast out so early. Cold weather and a shortage of food will cause it to be done.

E. HARPER (Sedbergh).—*Drone Breeding Queen.*—The queen has not mated, or she has been injured. Take her away and re-queen the stock. You may purchase and introduce a queen. It will be safer to place in the hive a comb containing worker brood just emerging from the cells a day or two before giving a laying queen. If queen cells are started they should be removed before the new queen is introduced; or give the bees a comb containing eggs, and brood in all stages. If there are eggs a new queen will be reared. If you can give them a ripe queen cell it will be still better; or the bees may be united to a queen right colony. Whichever course you adopt, remove the old queen first thing.

O. T. (Colerne).—*Uniting Bees.*—To give full instructions would take up too much space in this column. You will find an illustrated article on the subject in the RECORD for September, 1914, which will give you all the informa- you want under your first query. In the second case you could take away both queens, and introduce another one after uniting.

J. DRAPER (Hants).—*Driving Bees.*—Could you tell us where you heard or read of Sulphate of Ammonia for bee driving, as we do not know of it being used for that purpose? If you mean the paper cartridge used in the smoker, it is better not to use anything but dry paper. It is not clear from your letter whether you wish to *drive* bees or to *suffocate* them.

D. MUNRO (Bolton).—*Name of Bees.*—The bees sent are Andrena cineraria In future, please put your name on boxes of bees sent separately, or give us some other means of knowing by whom they are sent.

J. FERGUSON (Arran).—Under normal conditions the young queen emerges from the cell three days after the swarm has left. It would take up too much space in this column to tell you how to rear queens. Read the "Helpful Hints" articles now appearing in the "B.B.J." on this subject, the first of which was in the issue for April 29th.

Suspected Disease.

S. MILLAR (Lanarks), HARNHAM (Salisbury), W. E. (Chelford), A. LEVEY (Huntingdon).—It is "Isle of Wight" disease.

G. E. RETO (Somerset).—It is "Isle of Wight" disease. Sometimes the bees die off quickly, and sometimes a stock will survive a long time. The "crawlers" usually die during the first night they are exposed.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* **1d.** *per word as "***Business***" Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* **3s.** *per* ½*in., or* **5s.** *per inch.*

PRIVATE ADVERTISEMENTS.

CLEARING OUT.—100 section racks, complete, with waxed sections and dividers, 1s. 6d. each; 100 queen excluders, 3d. each; 30 Porter escape boards, 1s. each.—STAPLEY, Potton. v 66

BUSINESS ENCYCLOPÆDIA & LEGAL ADVISER, 6 vols., cost 63s.; what offers? or would exchange honey press and bees.—"HUSTLER," c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 41

BARLOCK TYPEWRITER (foolscap); 25-egg Stanton incubator; Wright's "Book of Poultry"; Cassell's "Popular Educator"; breeding pen White Leghorns (Hunter-Pyne strain), cash offers, or exchange 3 or 6-frame Lee's observatory hive, extractor, ripener, guaranteed healthy swarms.—Box 2, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 67

QUEEN REARING OUTFIT, Swarthmore principle, super with roots, shallow frames, W.B.C. ends, pine, 1s. 4d. each.—HORN, Bedale, Yorks. v 68

FEW STOCKS FOR SALE, 30s., or £2 with hive, young queens, no disease in district.—GRANT, Huyton, Lancs. v 69

HONEY, 1½ cwt., in tins, first quality, granulated, price and sample.—MEEK, Measham, Atherstone. v 70

SURPLUS VIRGINS, 2s. 6d., Dutch strain and Dutch hybrids, resistant and prolific.—PAUL, Salisbury-road, Bexley. v 71

CWT. granulated honey, in bulk, 60s.; this season's dark honey same price, f.o.r.—DAVIES BROS., Nurseries Apiary, Aberayron, Cardigans. v 73

SWARMS, early June, 12s., safely packed.—GLOVER, Biggin, Hulland, Derby. v 74

PURE ENGLISH CLOVER HONEY, granulated, in 28lb. tins, 58s. cwt.; all empties returnable; sample, 2d.—BUTTON, Manse Cottage, Haverhill, Suffolk. v 75

FEW 1915 QUEENS immediately, 4s. 6d.; 10-frame stock (superced), 32s. 6d.; with practically new hive and fitted super, 50s.; no disease.—LOWE, Lilac Villa, Chilwell, Notts. v 76

TWO nearly new W.B.C. hives, three shallow frame boxes, and lifts to both, 10s. 6d. each, worth double; several accessories.—H., 21, Lansdowne-grove, Neasden, N.W. v 78

A FEW good stocks of English Blacks for sale; also natural June swarms, 2s. 6d. lb.; all perfectly healthy.—Apply, R. METCALFE, Ebberston, Snainton, S.O., Yorks. v 79

TWELVE 1lb. glazed sections, well filled, have won two second prizes open competition, 10s. 6d.—H. S. DUCKERING, "Poplars," East Barkwith, Lincoln. v 80

YOUNG FERTILE QUEENS, 4s. 6d. each, safe arrival; medium honey, nominal lbs., 9s. 6d. dozen.—MRS. WARREN, The Terrace, Hathern. v 81

APIARY, near Tunbridge Wells, for sale, wintered, 8 bar frame hives now increased to 14 by May swarms.—KIRSTEN, Southborough, Tunbridge Wells.

WANTED, pupil-assistant on 14 acre fruit and bee farm, must have some previous experience, salary according to ability, references given and required.—Apply, PROPRIETOR, Overbury Fruit Farm, near Tewkesbury. v 60

SWARMS for sale, 15s., carriage free in non-returnable boxes.—NORRIS, Cashel. v 54

FOR SALE, 8 stocks of bees, strong and healthy, in 10 bar frame hives, three racks and lifts complete, 30s. each.—DURRANT, Freston, Ipswich. v 52

TWO 28lb. tins medium extracted honey; also sixty well filled sections; what offers?—TROTTER, Shadwell, Leeds. v 47

WANTED, honey extractor, perfect condition; state make, price, willingness approval.—WATSON, Post Office, Staplehill. v 40

BEES.—Strong stocks English, on wired standard combs, healthy, 30s. each; travelling boxes returned paid.—BLAKE, Church-street, Ilfracombe. v 46

SWARMS for sale, healthy, natural swarms; June, 10s.; boxes returnable.—C. LYNCH, Sgt. R.I.C., Killamary, Windgap, Co. Kilkenny, Ireland. v 39

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

HAVING obtained larger one, will sell Green's 10in. lawn mower, 8 knives, and grass box, 25s.; in excellent condition.—HERROD-HEMPSALL, Apiary, Luton, Beds.

FOR SALE, ½ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, cloth bound copy "Bee-Keepers' Record," Vol. 7, year 1889.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

THE JERSEY BEES HAVE ARRIVED.

ONLY a few stocks left for disposal; early application should be made to prevent disappointment.—Particulars, MANAGER, BRITISH BEE JOURNAL.

MOVING apiary, must clear, three cases each 1,000 Lewis's sections, 21s. per case; twenty racks extracted shallow frames, clean, 5s. doz. frames; racks 1s. extra; twenty empty section racks, 1s. 3d. each; fifty W.B.C. hives, complete with lifts, 10s. each.—E. F. J., "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

WILKES' free-way excluder and non-swarming method have resulted in enormous takes of honey; sample excluder, 2s.; illustrated work explaining prevention of swarming, with many photos, 1s. 1d.; send for 1915 catalogue, all post free.—WILKES, Four Oaks, Birmingham.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 6s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

HEALTHY NATURAL SWARMS, 14s. each, f.o.r., boxes returnable, cash with order; also 1 cwt. honey in bulk, 56s. per cwt.; sample, 2d.—T. PULLEN, Ramsbury, Hungerford. v 77

SECTION Glazing, lace paper strips, 7d. per 100; lace bands, 3in., 1s. 3d. per 100, post free; good section racks, slotted dividers, followen and wedge, complete, 1s. 6d., as new; also section racks, complete, 1s. 3d. each.—W. WOODLEY, Beedon, Newbury.

SWARMS till end of June, 12s. 6d.; July, 10s. each, healthy.—KNIGHT, Kenwyn, Truro.

THE OUTLOOK.

This, so far as bee-keepers are concerned, is at the time of writing good. We have had a spell of warm summery weather; there has been an abundance of fruit bloom and other flowers, and where the bees have not been decimated by that scourge, the "Isle of Wight" disease, they are doing well. No doubt, as a farmer friend put it, "a shower of rain all day to-morrow would do good," but the last few days we have noticed here and there heads of white clover in full bloom, and one field of sainfoin near our apiary is becoming tinged with the deep pink of the flowers.

Swarms have been numerous, and those that came off early are giving a good account of themselves, some having already not only built out the brood combs but stored a considerable amount of honey in the supers.

The one "fly in the ointment" is the continued prevalence of "Isle of Wight" disease. Although it appears to have abated somewhat in the south of the country, judging by the queries and samples of bees received at this office it is playing havoc in the more remote districts.

May we ask those who send bees for diagnosis to give us particulars of any symptoms they may notice. Many of our readers do this, but there are numbers who send up from a couple or three bees up to as many as would fill a half-pint measure with the simple query, "Please say what has caused the death of these bees and what would you advise me to do?" One might almost as well send a message to the doctor saying, "I am ill; please send a bottle of medicine," and, without any other particulars to guide him, expect a suitable concoction to be sent.

PREVENTING "ISLE OF WIGHT" DISEASE.

When writing on this subject in the "British Bee Journal" for May 27th, p. 175, I find I omitted mentioning one precaution that should be taken, viz., not to allow pieces of broken crockery, tin lids, tins, or even hollow stones to lie about near the hives, with the hollow side upwards. During a shower these collect water which will be held until it evaporates, and it is quite probable that this water will be contaminated by excrement which has dropped on the articles. There may also be more danger from this source than from water collected from the ground or vegetation, as it will last longer, and will become slightly warmed by the sun or the latent heat in the ground. The last fact should not be lost sight of, as bees will prefer water that has the "chill" off; the drinking water should be placed in a warm corner, or where the sun will warm it. This, of course, will mean that it will require renewing oftener, as the evaporation will be more rapid than when it is in a cool place.—J. H. H.

BLURTS FROM A SCRATCHY PEN.

A VISIT TO JERSEY.

A grip of the hand. The promise of a good obituary notice should I never return. Not a very heart-elevating farewell this? I felt almost as if I were leading a forlorn hope. But I was crossing those narrow seas where submarines and torpedoes prevail. It was just on the possibilities therefore that the "scratchy pen" might have made its last splutter. That such was not the case I think the present effusion is ample evidence.

It was midnight when we started from the old-fashioned seaport of Weymouth. Light low, and darkness, was the command. How different from the last cross-Channel trips I had taken before the war! Portland Race is a nasty start for the trip, and the flashlights off the Bill shone on a choppy sea with a running tide. I am now fairly accustomed to the roll of a vessel, nor does it with me create a yearning to bring up my immortal soul, as Artemus Ward says. No, I snugly ensconced myself in a shady corner and, dozing, awaited the break of the day.

For I dearly love, on the seas, to watch the change from the darkness to the light. It steals over the waters, the approaching day heralding the coming of the sun. Softly but persistently it melts into the gloom of the night, gradually changing all to a soft grey, and more as it mixes you discern on the waves shadowy objects. Now the brown sail of the fishing smack, again a steamer, which has passed in the night, and left in its course a long black cloud of smoke. Then in the furthest east the red orb of the rising sun shows itself, small at first, its rays caught for the moment by the crimson pillows of the bed from which it is emerging; but, mounting higher and higher, flashing arrows shoot athwart the waves, touching their tops and lighting them up with a dazzling brilliancy you cannot gaze on, while in the shadows of their crest their colour is that green-grey

we all know so well—and the gulls scream out their morning salute to their Maker and the new-born day while circling round the ship incessantly, now on this side and then on that, or skimming the surface to pick up some morsel thrown overboard.

The sun was nearly two hours old when from the distance the hills showed that we were nearing Guernsey. The town and port is level with the bay, but on the encircling hills the houses nestled, some in English and many in French style of construction. As we entered the land-locked harbour forts and fortifications threatened us from every hill. Recollections only now of French wars. Useless as wooden huts against modern artillery. On the quay there gathers this Sunday morning a crowd to meet the arrival of the boat. The bells from the church steeples rang out their call to early morning services. The quiet streets and the children in their Sunday best, the smoke rising straight up from the chimneys, the growing crops on the hill-side, all spoke of peace. But that sentry marching to and fro, that armed guard, all told of war, and war, too, almost within sound of cannon. The assemblage on the quay! That old brown tanned woman, with bonnet of white linen ample in its folds, surely she is from Brittany. That merchant of fruits. I have seen his similar, clad in blouse in "Les Halles" in Paris. A French patois and its English equivalent are heard on every side, and the dock hands seem half of one country and half of the other.

We stay but to drop our consignments for the island and pick up other charges. Then the boat is turned and we resume our voyage. An hour and a half brings us within sight of Jersey. What a frightful coast for a stormy winter's night! Granite boulders and rocks, now flat to the water's edge, now massive heaps, now as gigantic teeth, surround the shores. Pity the fate of the vessel driven by stress of weather among them. They would pierce, and rend, and rip, and grind her to atoms in their cruel grip. But now it is a laughing May-day scene. The sun shines brilliantly. There is scarce a ripple, save where the wash of the passing steamer breaks, and the children—I see them in the distance—paddling and playing in the water. These old rocks are fine things to climb, and occasionally they find in their crevices, while hunting for crabs and lobsters, relics of bygone ships which have here met their fate.

St. Heliers is the port and chief town of the island of Jersey. High above the town and commanding the seaway is the old fort, and from the cliff you see the cannons' muzzles, but they are useless except for salutes, and the manhood of Jersey is away at the wars, for every one of military age and capability is here obliged to serve in the Militia, so when war broke out there was a force ready at hand for Britain's service.

(To be continued.)

"BOOTS" AND "ISLE OF WIGHT" DISEASE.

Instead of being a "Churchgoer" you have brought upon yourself the unenviable reputation of that of a "Parasite-carrier."

The fact of the matter is this: you heard your neighbour's bees had contracted "Isle of Wight" disease, and instead of going to church on Sunday morning, you thought you would take a walk and just look round his apiary. You tramped about the ground among his hives—of course you would not even dream of touching one of them for fear of spreading infection. You then called upon another neighbour, inspected his apiary, and congratulated him on his bees being free from disease, and during your Sunday morning ramble you visited various other bee-keeper friends, thus carrying infection on the soles of your boots, at the same time neglecting your own soul, and so spreading *Nosema apis* among your neighbours and around the country-side, also encouraging *pathogenic* sympathy among your own bees. By all means disinfect your hands after examining diseased stocks, your clothes, your hive tool, smoker, and all bee appliances, but for pity's sake do not forget to disinfect your boots also, since the spores of *Microsporidiosis*, less than 1000th part of a grain of rice in size, will exist a whole year or more in the almost insoluble chitine covering of dead honey bees, and will also infect pond water, blades of grass, and dead leaves; therefore among it all do not forget your Parasite-carrier—boots.

I hope I am not on the wrong track as to this theory of mine of spreading "Isle of Wight" disease by means of "boots." I trust my bee-keeper friends will forgive me for thus taking this "*cleansing flight*" *re* the dreaded *Microsporidiosis*.—(Rev.) F. S. F. JANNINGS.

MAKING SEALING WAX.

In response to a request from a correspondent we reprint the following recipes for making sealing wax. Only one of them contains beeswax, but possibly the others may be useful:—Venice turpentine,

2oz.; shellac, 4oz.; colour with 1oz. vermilion for red, for black use ivory black or sufficient lamp black mixed with turpentine to colour it; for green, finely powdered verdigris; blue, verditer or smalt; yellow, massicot or chrome; purple, vermilion and smalt. For common bottle wax melt together 18oz. resin, 1oz. shellac, 1oz. beeswax, and colour with either red lead, Venetian red, or lamp black.

SWARM OF BEES IN A CLOTHING WORKS.

A "Constant Reader" sends us this cutting from the *Halifax Daily Guardian*, and adds this postcript, "And he deserved to be burnt":—

"Consternation was caused in the clothing works of Messrs. Redman Bros., Scarbottom Mill, Mytholmroyd, on Wednesday, June 2nd, by a swarm of bees from a local apiary taking refuge there. They entered the overlight, which happened to be open, in their hundreds, and flew amongst the girls, causing them to be much alarmed and to cease work. A number of the male workers tried to exterminate the insects. Various methods were used, and as the last resource, a quantity of sulphur was set on fire, but when work finished for the day there were a quantity still left. Mr. John Gibson had the misfortune to have one of his hands badly burnt by burning sulphur getting on to it."

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

PREVENTING "ISLE OF WIGHT" DISEASE.

[9146] I am a constant reader of the "British Bee Journal," and find great help from writers of experience who contribute to its columns. Until the last few months we in North Cornwall only knew what we read about "Isle of Wight" disease. It has now come within a mile of my apiary, and I have done all that is possible to keep off the disease, always using Apicure and Izal. In order to help unfortunate brother bee-keepers in my neighbourhood I have promised to set them up with new swarms free of cost if they will destroy all stocks infected, and I find they are very delighted and willing to do so. Don't you think if others would help in this or some other way it would do much to stamp out this terrible disease?—T. C. Honey.

[It is always a pleasure to know of bee-keepers taking such practical measures to prevent the spread of disease. We have known numbers of cases in which bee-keepers have acted in the same manner as our correspondent. These actions not only bring bee-keepers into closer touch with each other, but are sound policy from a business point of view. It will pay to give away a few swarms if by that means we can keep at a distance a disease which would probably wipe out the whole apiary.—Eds.]

IZAL AND "ISLE OF WIGHT" DISEASE.

[9147] In order that hopes foredoomed to remain unrealised may not be raised in the breasts of bee-keepers by the Rev. Newman's letter (9142), I hasten to inform your readers that neither Izal, nor any other tar-derivative, has proved of the least value as a remedy for Microsporidiosis. The fact that an improved condition of the bees (highly unlikely, by the way, to be more than temporary) followed the use of Izal was a mere coincidence. In the light of past experience, any claim of a "cure" unsupported by microscopical evidence that Nosema has been eliminated from the gut, or, at least, the numbers of the organism present very materially reduced, must be regarded with grave suspicion.—C. H. Bocock.

FOREIGN HONEY AND ENGLISH SHOWS.

[9148] I was surprised to find, on attempting to enter an exhibit in the various honey competitions in England, that nearly all barred *foreign competition*. Two notable exceptions were the Richmond and District B.K.A., where I won a third prize, and Cannock and District Horticultural Society, who accepted my entry, but were compelled to call the show

off on account of the war. As you know, I am a member of the B.B.K.A., and will send an exhibit to any show where they will accept same, for either their regular or a special class. Most American shows are open to the world.—WALTER C. MORRIS, Nepperhan Heights, Yonkers, N.Y., U.S.A.

AN ANCIENT COLONY.

[9149] I should like to bring to your notice a stock of bees in "New Tavern Fort," Gravesend, which might interest you if you are near there at any time. They have apparently been there some time; their home being in a hollow wall and the main entrance through a ventilating tile about 18 inches from the ground.

"New Tavern Fort"—of ancient history—has been a chapel, an inn, and is now W.D. property. Its history dates back some hundreds of years, so that the bees may be the progeny of many generations.

A permit to view the old portions of the fort can be readily obtained. Unfortunately, little can be seen of the bees' domestic affairs.—MUDHEAD.

PRESS CUTTINGS.

THE TRAGEDIES OF THE BEES.

The bee-master who spends much time in watching his charges sees very much to make him put the intelligence of the best insect as high as that of most animals, and even to give it a quality that can only be called human. Not only the sense but the sensibility of the bee compares favourably with that of man, or, at any rate, with that of the superman that is expected to come hereafter. We make that qualification because the bee has an inexorable social conscience that often overrules the personal virtues, as the justice of Brutus overruled the dictates of his paternal affection. Towards this end the bee has an advantage in the fact that she has no children of her own, and thus, in any sense that we can appreciate, no sexual or family instincts to warp her perception of what is just or expedient to the good of the community. Yet the bee-master will see that the bee is not free, as these considerations might lead us to suppose, from some sort of more than tribal conscience and less than tribal predilection. We will endeavour to give, from the few facts seen in one day's watching and experiment, some idea of the bee-tragedies that result from warring instincts in what is generally thought a perfect communal machine.

The day began with the robbing of a weak hive by a strong one. It is an incident not uncommon in a season of scarcity of blossom, but to-day there was a great abundance of honey and pollen, as could be seen in the crowds of honestly loaded bees coming home to the strong hive. Yet about one per thousand of these foragers went neither to dandelion nor arabis, cabbage or gooseberry, cherry or apple, but to the dangerous and bloody business of robbing a neighbour city of its accumulated sweets.

Only about ten robbers came at first. They were easily known among the honest citizens by their prolonged to-and-fro flight round the entrance of the hive, their hind legs hanging down as though to enable them to alight or to spring away in the act of alighting. You would think they might have gone in without challenge if they had attempted it boldly. But conscience made cowards of them, and they dangled and hovered while forager after forager went straight through the door without attracting a glance from the guards. When at last the robber had courage to alight, she often went in easily enough. Sometimes a guard questioned her, when a very brave robber would stand and parley, and somehow pass muster. Several times the burglar bee would run behind one of the citizens just as though her object was to contract the hive smell, to get the passport that would fool the guards. After this manœuvre, we saw one or two go in without difficulty.

To pass the guards was not, however, the whole battle. Something terrible happened within the hive, and the robber came out in the jaws of four or five nurses, or other home citizens. She struggled with them, and pulled the whole squad, but they never all let go at once. They gnawed at her wings, and made other attempts on her anatomy that the human observer could not get the meaning of. They did not try to sting her, perhaps on the understanding that she did not try to sting them, for in a case like this she never did. When they let her go, she was usually incapable of flight. Other robbers met with a different reception. A single defender would clinch with one of them, and the foes would whiz down the alighting-board like a single Catherine-wheel loose from its pin. In this kind of encounter, stings were allowed, and one of the combatants remained on the ground to stagger and tremble, double up, as though in the attempt to sting herself, and die.

Volumes could be written on these conflicts by a Stanley Weyman of the bee-hive. Two or three of the first ten

robbers got away with their booty. They came back, each reinforced by ten. The guard of the weak hive was driven in, and what fight there was took place round the treasure within, and resulted more and more in favour of the invaders. We tried every other known method to save the little hive, and then resorted to the heroic expedient of making the robber and the robbed change stands.

Tremendous have been the happenings to the bees to-day. First of all, the foragers of the strong hive, returning from the fields at the rate of two every second, found their home clean vanished. Soon there were full a thousand bees flying round the place, their thighs loaded with every hue, their crops full of honey, and with no home to unload in. Then, suddenly, the home reappeared in a new guise, but assuredly a hive, and in the old place. The returning bees smothered the entrance, and it was an hour before they could get the traffic regulated and resume more or less the plunder of the fields. Who knows how much they were able to appreciate of what they found within? Nothing was as it had been. The honey vats and pollen tubs were in different places. Instead of a teeming nursery of 40,000 grubs, there were scarcely 4000, and the beggarly corps of nurses attendant on them, terrified out of their wits, tried to keep out the flood of workers with instruments no better fitted to their purpose than Mrs. Partington's mop. There was some killing done, but not much. Gratitude for such a harvest replaced terror in the breasts of the nurses, and the magnanimity of a full stomach stirred the foragers to spare the aliens in their strangely altered city. Bewilderment, too, must have been so heavily their portion as to throw normal instincts out of gear. There can be no wild bee law to fit so strange a case as this. Never does wind or flood snatch up two bee trees and set them down in one another's place.

Perhaps the case of two classes of people at the place where the strong hive stood upon the site of the weak one was harder even than that of the nurses slain by strange foragers in their own hive. First, there were the honey-bringers lately accustomed to find a fight raging at the door, but to be allowed to enter with their burdens. Now they found the robbers in full possession, no friend anywhere even to help them put up some sort of fight. Yet perhaps they were not hindered by the robber guard, for one of the bee laws says that a bee bringing honey is free to enter any hive. If the old weak bees came in under this law (it was hard to see whether they did or not), who shall picture their astonishment at finding the city suddenly grown from a Cranford to a Babylon, and themselves, formerly of some importance in the State, sunk to mere cyphers in an innumerable population?

Then come the robbers from the new hive in their old location to loot their own hive, no longer recognisable as such, because it is on foreign ground. They are met by their own people; the guards of a portal whithersoever it may be moved, who formerly welcomed these robbers home, but now sternly stand in their way, apprehend them, and proceed to mortal execution. Some bee or other, whether one of the hive that stood where this one does, or a robber condemned by Fate to assault her own hoard, is received by the guards in quite a new way. They seem willing to push her away rather than lay hands of hate upon her. She bows head and tail, and clings tight, acknowledging the right of no one to deny her entrance to that hive. They still push her, and seem to say, "Come, old girl, it's no use. You can't come in." She sits there, unwilling to fight, unwilling to argue, just a passive resister. They seek about her for a vital spot. She hides it without violence. "Don't kill me!" she seems to say. "See what a hard case mine is!" She is free to fly away, but has nowhere to go. They find the spot, and kill her. These are just bare facts. Who will see them, collate them, and therefrom make out what the philosophy of the bee is?—From *The Nation*.

ITALIAN BEES.

Every now and again some enthusiast works himself up to fiery eloquence about Italian bees. If all that has been said about them at various times were true, no one would ever keep any other kind. They have been declared to be 50 per cent. better than blacks in the matter of honey storing, to work early and late, to be better resisters of disease, to be chary of swarming at inconvenient moments, and, above all, to be so amiable that they may be handled like flies without smoke or any other form of intimidation.

It will, therefore, be somewhat of an anticlimax to all this wonderful record to assert that it would probably have been better for English bee-keeping if the Italian bee had never been introduced into this country at all. Yet that is what I feel very strongly disposed to allege, after a careful examination of all the evidence I have been able to get upon the subject.

Although specifically the same as the black bee, the Italian or Ligurian bee is

very different in appearance. It is, in fact, one of those local races or varieties which are met with very frequently in the insect world. It is, as its name implies, a native of Italy, being found wild in the Alpine region. The most obvious difference between this variety and the black bee is the colouring. It is in general somewhat lighter brown, and the three anterior segments of the abdomen are bright golden yellow. The queens sometimes have the abdomen entirely yellow, and are always very much brighter in colour than the workers. The only other physical difference is in the tongue, which is a trifle longer than that of the black bee. It was probably this difference in the length of tongue which aroused the enthusiasm I have spoken of, the contention being that it enabled the Italian to extract honey from flowers which the black could not reach. From time to time various bee-keepers have said that the Italians work on red clover, notoriously inaccessible to the black bee. That they do this as a matter of course seems to be extremely doubtful, to say the least, and it is probably the real truth that those reported were on the second crop of clover blossom, which is smaller than the main crop, and can, in point of fact, give up what little nectar it contains to the black equally well. There is certainly no other flower in this country yielding nectar in quantity which the Italian alone can secure the honey from, and in all my researches into this question I have failed to find any mention of a particular flower as being visited by Italians and not blacks.

With regard to the second point, it would certainly seem to be well established that in fine weather the Italians do work earlier and later in the day. At the same time, this is, in my experience, more a matter of individual characters in certain colonies. Regardless of race, I have often noticed one hive working steadily an hour after others had left off. In most cases there is a sound reason for this inside the hive. The colony may be breeding at very high pressure, and be obliged to store to the very utmost of its ability; but, more often than not, the simple explanation is that this particular stock has found a hive, a jam store, or some other illicit supply of sweets. To such perverted ways it is, perhaps, only in the nature of things that the hours of sunshine are not the most suited.

The contention that blacks were more subject to foul brood comes from America, but the experience of the Swiss is overwhelmingly against this. They say that the disease is not only more common, but more virulent, in the Italians. In this country there appears to be no notable difference in this respect, although it should be borne in mind that those who go in for Italians are the more advanced bee-keepers, who naturally take precautions to keep their stocks free from disease. For some time it was confidently asserted in some quarters that the Italians were not attacked by the "Isle of Wight" disease. That was proved to be all nonsense by the reports of the Board of Agriculture, and, if anything, the Italians succumb more easily, given an equal opportunity of infection. As I shall show later, the chances are that they take it more readily than the blacks. Italians are certainly very prolific, and, providing the spring is favourable, become ready for swarming earlier than the blacks. *Pure* Italians (I italicise this advisedly) are more amiable than blacks, and have the merit of sticking fast to their combs when these are handled, instead of spreading themselves all over the apiary.

Notwithstanding the records of high yields of honey from stocks of Italians, I am convinced that these are exceptional, and are only made when the season is of very uniform character. When the weather is uncertain and changeable, as most of our seasons are, the Italian stocks drop behind. This is only natural, having regard to the country of their origin. There is strong testimony to the fact that Italians do not winter so well, and here, again, one could hardly expect anything else. In fact, those experimental bee-keepers who have given Italians a prolonged trial have been so impressed with the unhardy nature of the variety that they have, in several cases, endeavoured to produce, by Mendelian methods, a race of bees coloured like Italians, but having the better qualities of the black bee. That good results have been permanently secured is, I think, very doubtful.

One definite characteristic of Italians which should go far to wipe out all virtues, real or imaginary, is their inveterate devotion to robbing. I have been much struck with the weight of evidence on this point. One bee-keeper after another has given them up entirely, solely on this account. Even when other stocks were busy gathering honey—a time when robbing should certainly not be going on—the Italians have been engaged in this nefarious pursuit. Of itself, robbing is a most undesirable thing to have in the apiary. At the best it means only the transfer of honey from one hive to another with loss of life. At the worst it means the rapid spread of disease and the wiping out of weak and nucleus hives.

If it were possible to segregate the Italians, these bad qualities—to which might be added their poor comb-sealing ability, which puts them entirely out of court for the production of section honey—would be kept to themselves. Unfor-

tunately, however, it is impossible to control the mating bees, and the consequence is that there are a very large number of hybrid stocks of bees about the country. Indeed, one of the reasons addueed by Neighbour, who introduced the Italian in the year 1859, was that it would improve our race of bees by introducing new blood. If there were real in-and-in breeding among bees, there might be reason in this contention, but, as a matter of fact, it is not the case that close inbreeding occurs commonly among bees. It is notorious that queens often make very long flights on their wedding journey, and a black queen has produced hybrid offspring when the nearest Italian colony was over two miles away.

What are the characteristics of these hybrids, or, rather, mongrels, for, being the same species, they cannot be hybrids? First and foremost, excessive irritability. They are positively wicked bees. Most stocks wait until they are interfered with before doing any damage, but mongrels sally out and attack you while yet a long way off. Why it should be so I do not understand, but it is abundantly proved. Beyond this the mongrel appears to be nothing more than one would expect, neither wholly good, nor wholly bad, but simply—a mongrel. In my experienee they went under first when "Isle of Wight" disease appeared on the scene, and it is my deliberate opinion that the sooner we stop importing Italian bees and allow our native black race to thoroughly rehabilitate itself, the sooner are we likely to get free from the scourge that has troubled bee-keepers so long.—HERBERT MACE in *The Field*.

INDUSTRY AND PASTIME.

It is recorded in the works of ancient writers that bee-keeping was practised as an industry many years before the dawn of Christianity. That it was to some extent carried on in Ireland during the centuries succeeding the arrival of St. Patrick upon our shores is proved in the records of the time. In the Rule of St. Ailbe, written near the beginning of the fifth century, we read:—"When the monks sit at table, let there be laid before them herbs or roots washed with water and in clean dishes, also apples, ale, and from the hive the breadth of an inch of honeycomb." About two centuries later, Alfred, King of the Northumbrian Saxons, who had been in Ireland, tells us, in a poem on his experiences, he found in Eirinn much food, gold, silver, honey, wheat, health, prosperity, traffic, and cities. These and later references lead one to believe that honey was highly valued by our forefathers as an article of diet. In the list of tributes (as enumerated by Jocelyn), which the Bishops of the Norse Colony established in Dublin in the ninth century were obliged to pay to the Archbishop of Armagh, we find the entry—"From every merchant ship, a cask of wine or honey." Towards the end of the century which saw the Anglo-Norman invasion, honey was one of the principal commodities for sale at fairs and markets throughout the country.

OLD-TIME BEE-KEEPING.

From Virgil's day down almost to our own time it was the invariable practice to hive the bees in skeps made of pottery, osier or straw, and leave them to fill their chamber with honey, which the bee-keeper could obtain only by smothering the bees. It was this ingratitude towards these little benefactors of man which moved Robert Southey to express in poetic strain his sympathy with the bee:—

"Little dost thou think, thou busy, busy bee,
What is the end of thy toil.
When the latest flowers of the ivy are gone,
And all thy work for the year is done,
Thy master comes for his spoil."
—From the *Irish Independent*.

WEATHER REPORT.

WESTBOURNE, SUSSEX.

May, 1915.

Rainfall, 3.95in.	Minimum on grass, 30, on 15th.
Above aver., 1.96in.	Frosty nights, 1.
Heaviest fall, 1.86, on 13th.	Mean maximum, 62.1
Rain fell on 11 days.	Mean minimum, 44.8.
Sunshine, 240.2 hrs.	Mean temperature, 53.4.
Above aver., 4.5 hrs.	Above aver., 1.4.
Brightest day, 24th, 14.6 hrs.	Maximum barometer 30.325, on 9th.
Sunless days, 4.	Minimum barometer, 29.607, on 13th.
Maximum temperature, 76, on 26th.	
Minimum temperature, 32, on 15th.	

L. B. BIRKETT.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 29th to July 3rd, at Nottingham.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretaries, 23, Bedford Street, Strand, W.C. **Entries closed.**

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

[9006] *Bees Working on Laurels.*—Bees are very busy at the laurels; they go to the underneath side of the leaves along the midrib. I see no honeydew, and should like to know what it is they are getting.—C. R. I.

Reply.—If you examine the underside of the laurel leaves you will find small punctures close to or on the midrib, from which a sweet sap exudes, and it is this that the bees are gathering.

[9007] *Inserting a Queen cell.*—If a stock has numbers of drones, no brood, or eggs, and on examination one fails to find a queen a month after swarming, and assuming the queen gone, gives a ripe queen cell, what will happen if there should be a queen. Will she tear down the cell, or will the bees be induced to swarm?—H. J. H.

Reply.—All depends on the strength of the colony—if crowded with bees they may swarm; if not crowded, the cell will probably be torn down. If you give the bees a comb containing eggs before inserting a queen cell they will, if queenless, commence building queen cells round some of the eggs.

Write to Mr. F. D. Hills, "Ivanhoe," Park Close Rd., Alton.

[9008] *Fertile worker or queen.*—There are about five sealed brood cells (three on one frame, and one each on two others), whose capping is about $\frac{1}{8}$in. above the others. (1) Does that mean a fertile worker is laying? There is plenty of brood in all stages. A swarm of bees was hived on six frames of foundation on May 9th. On examining same on May 23rd a queen cell was discovered fully drawn out with the mouth open. I gave two more frames of foundation. I examined them on the 30th, and again to-day, but the cell is not altered. (2) Why is this? (3) If the bees intended swarming, would they have more than one queen cell?—Tom Bright.

Reply.—(1) No. A laying worker will not be tolerated in a colony possessing a queen. Drone larvæ are often found here and there in this manner, especially when the queen is old or failing. (2) Probably a young queen has been reared to supercede the old one, and has emerged from the cell. You do not say whether it is occupied by a larva or not, but we judge it is empty. (3) Yes, as a rule. There are usually any number from six to thirty.

[9009] *Swarming Trouble.*—Having just started bee-keeping, I have found a trouble with the first swarm that I am not able to get over. Can you give me information? I bought some bees in a ten-frame box—not worthy to be called a hive. The box was very full of bees. I put on a section rack and queen excluder. After three weeks they swarmed, but without settling down returned to the old home. The following day they did the same. The third day they settled down just for about two minutes and back again. The fourth day they settled down, and I brushed them into a skep, but seeing they were going back, I took the old hive to another stand and covered it up, putting an empty skep on the stand. It was soon covered with bees. With the assistance of a little smoke I got them in and well shaded the hive. But at night I had only one bee left. All gone back. Then I examined the section-rack, in which were a good number of bees, but no work done. Then I put the blame on myself, that I did not put the queen excluder on right, so I put on the second rack and removed the queen excluder altogether. Then they commenced driving the drones. I picked up twenty dead ones, and on Sunday morning, about 5.30 a.m., when no other bees were about, I saw a drone come out, and as near as I could make out by the bee language, he was crying out, "Save me, O save me from my friends!" But after a week's rest out they came again yesterday, and I brushed the greater part of them into a skep, but all left and went home again. This is now five times, and up to yesterday they were always very good-tempered with me, but yesterday it seemed that the old gentleman in black was in them. Could you give me any information as to its cause, or how is the

best way to deal with them? There were bees enough came out for two swarms. If you can give me information I shall be thankful.—ROBERT HOLE, Alcombe, Taunton.

REPLY.—The queen has not been with the swarm. She may have been lost, but the probability is that for some reason she is unable to leave the hive, possibly through some infirmity. If you wish to increase your stock, take out a couple of combs and place with the old queen in a new hive, filling up with new frames fitted with foundation. Remove the old hive to a new stand, putting the new hive in its place. This should be done on a warm day, when the bees are flying freely. The flying bees will return to the old stand and form the swarm. It will be advisable to remove the racks of sections from the old hive for a time and one should be placed on the new stock. Another way of dealing with them is to make a nucleus with three combs, two containing honey and the other brood, and a queen cell if there is one. If there are no queen cells left, choose a comb with a good number of eggs. The bees from a couple more combs may be shaken into the nucleus, but be quite certain that the queen is left in the old hive. Three frames fitted with foundation should replace the combs that have been removed. A young queen will be reared in the nucleus, which should stand near the old hive, and when the young queen commences to lay, or after the honey flow, the old queen may be taken away, and the nucleus and young queen united to the old stock.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

E. M. M. (Glos.).—*Bees casting out Drones.*—The bees appear to be all right. The drones are not usually thrown out so early in the season unless there is a spell of cold or wet weather, and food becomes scarce. A scarcity of food and the weakness of the colony would account for the other bees being thrown out. We commend the idea of raising your own queens.

R. L. O. (Mundesley).—The yellow bees will be Ligurians, which have strayed from a colony of that variety in the neighbourhood, or, perhaps, they may be covered with yellow pollen. Your letter is not explicit enough to enable us to say which.

Suspected Disease.

G. LANG (Honford).—Both bees were dead on arrival. One is a virgin queen, the other shows no symptoms of disease. No doubt there will be another queen in the hive, and we should advise you to let her remain instead of purchasing a fresh one.

T. BUTTON (Haverhill).—There was no disease in any of the samples of comb sent, and the bees were too dry for diagnosis. There were symptoms pointing to starvation as the cause of death.

P. SLEIGHTHOLME (N. Hykeham).—The box arrived smashed. The envelope had been torn in transit and "officially sealed," but there were no bees.

W. H. FOUNTAIN (Leicester), G. M. JESSOP (Kimberley), "NOVICE" (Cirencester), J. P. SOUTON (Glasgow).—The bees are suffering from "Isle of Wight" disease.

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	£26	15	6

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1d. *per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS.

SOLID leather portmanteau, in good condition; would exchange for swarms; what offers?—HILDRITH, 74, Navigation-street, Birmingham. v 94

GUARANTEED strong, healthy swarms, 10s., or 2s. 6d. lb., cash with order.—WHITTING, Manea. v 99

WANTED, honey in exchange for 200 sections, six sections, crates with dividers, two skeps, bottle, and rapid feeders, all in good condition.—H. TURK, Rivers Corner, Sturminster Newton. v 98

DUTCH and Dutch hybrid virgins, 2s. 6d., hardy prolific strain.—PAUL, Salisbury-road, Bexley. v 97

WANTED, good Solar wax extractor.—Particulars to TAYLOR, County Bank, Chorley. v 96

WANTED, two healthy swarms.—Price, weight, guarantee, to PURCELL, Woodstock-road, Walthamstow. v 95

FOR SALE, six dozen shallow frames, metal ends, wired, and drone base foundation, price 25s.—Apply, S. COCKS, Napton Locks, Rugby. v 91

FOR SALE, motor bicycle, Ormonde, £6; tricar, Humber, £20; or exchange for bees.—WHITEHEAD, Eccleshill, Bradford. v 93

FOR SALE, fifty W.B.C. hives, good condition, 5s. 6d. each to clear; extractor and ripeners, 500 split top section frames, treadle saw-mill.—MRS. OWEN, Risby, Bury St. Edmunds. v 90

FOR SALE, or exchange for bee appliances, nanny, just left second kid.—SCHOOLMASTER, Henstead, Suffolk. v 89

WANTED, observatory hive, must hold sections in top, must be cheap.—V. CODY, Vale Croft, Ash Vale, Surrey. v 88

YOUNG pure Dutch fertile queens, 4s. 6d. each; safe arrival, immediate dispatch.—STIMSON, The Apiary, Bill Hill, Wokingham, Berks. v 87

SALE, honey, excellent quality, granulated, last autumn's, in 28lb. tins; sample, 3d.—COLE, Roxholme, Sleaford. v 86

EXCHANGE twelve cottage hives, to take ten standard frames, for bees, or cash.—SUGDEN, Askern, Doncaster. v 85

STRONG MAY SWARMS, from healthy hives, make grand stocks, 15s. each.—P. WAKE, Courteenhall, Northampton. v 84

BEES, strong swarms, 15s. and 13s. each, cash. —HEAD GARDENER, Hawkeshead, Hatfield. v 83

BARLOCK TYPEWRITER (foolscap); 25-egg Stanton incubator; Wright's "Book of Poultry"; Cassell's "Popular Educator"; breeding pen White Leghorns (Hunter-Pyne strain), cash offers, or exchange 3 or 6-frame Lee's observatory hive, extractor, ripener, guaranteed healthy swarms.—Box 2, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 67

FEW STOCKS FOR SALE, 30s., or £2 with hive, young queens, no disease in district.—GRANT, Huyton, Lancs. v 69

CWT. granulated honey, in bulk, 60s.; this season's dark honey same price, f.o.r.—DAVIES BROS., Nurseries Apiary, Aberayron, Cardigans. v 73

PURE ENGLISH CLOVER HONEY, granulated, in 28lb. tins, 58s. cwt.; all empties returnable; sample, 2d.—BUTTON, Manse Cottage, Haverhill, Suffolk. v 75

TWO nearly new W.B.C. hives, three shallow frame boxes, and lifts to both, 10s. 6d. each, worth double; several accessories.—H., 21, Lansdowne-grove, Neasden, N.W. v 78

A FEW good stocks of English Blacks for sale; also natural June swarms, 2s. 6d. lb.; all perfectly healthy.—Apply, R. METCALFE, Ebberston, Snainton, S.O., Yorks. v 79

WANTED, pupil-assistant on 14 acre fruit and bee farm, must have some previous experience, salary according to ability, references given and required.—Apply, PROPRIETOR, Overbury Fruit Farm, near Tewkesbury. v 60

SWARMS for sale, 15s., carriage free in non-returnable boxes.—NORRIS, Cashel. v 54

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

HAVING obtained larger one, will sell Green's 10in. lawn mower, 8 knives, and grass box, 25s.; in excellent condition.—HERROD-HEMPSALL, Apiary, Luton, Beds.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, cloth bound copy "Bee-Keepers' Record," Vol. 7, year 1889.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

THE JERSEY BEES HAVE ARRIVED.

ONLY a few stocks left for disposal; early application should be made to prevent disappointment.—Particulars, MANAGER, BRITISH BEE JOURNAL.

MOVING apiary, must clear, honey ripener, large size, 9s.; twenty racks, extracted frames, clean, 5s. doz. frames, racks 1s. extra; twenty empty section racks, 1s. 3d. each; fifty W.B.C. hives, with lifts, 10s. each.—E. F. J., "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—ROSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

WILKES' free-way excluder and non-swarming method have resulted in enormous takes of honey; sample excluder, 2s.; illustrated work explaining prevention of swarming, with many photos, 1s. 1d.; send for 1915 catalogue, all post free.—WILKES, Four Oaks, Birmingham.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

EFFECTS OF BEE DISEASES.

Information and statistics relating to bee diseases are being collected by Mr. Charles H. Heap, of 22, Rowley Road, Reading, who will be glad to receive statements from association secretaries and individual bee-keepers on the following and other points:

(*a*) The introduction of disease (foulbrood or "Isle of Wight") into previously uncontaminated districts by stocks, swarms, driven bees, or queens.

(*b*) Refusals of bee-keepers to destroy diseased stocks, particularly cases in which special inducements have been offered.

(*c*) Losses and hardships due to outbreaks of bee diseases, including instances in which persons have been deprived thereby of the whole or an important part of their incomes.

(*d*) Effects on horticultural and agricultural crops: (1) Increases by the introduction of honey bees; (2) decrease owing to the absence of bees or diminution of their numbers.

The information, which should be as full and complete as possible, should include the name of the town or village (together with that of the county) from which it is derived. Correspondents are also desired to give their own names and addresses. Only facts which can be verified are required.

By Nemo.

Bee-keeping and the War.—M. Barottin, the Vicar of Maixe (Meurte-et-Moselle), says, in *Revue Française d'Apiculture*, that for twenty-two years he has carried on satisfactorily bee-keeping in movable frame hives. The district of Briey, where he was vicar for eleven years, was a good one, and he could always depend on two good seasons out of three; one year of melilot, followed by one of vipers' bugloss. The third year, however, if favourable, would generally yield sufficient for winter provision. He never kept more than twenty colonies, and he was only acquainted with enemies of bees, diseases, foul brood, and robbing from what he had read in books.

For eighteen months he has been Vicar of Maixe, eight kilometres from Luneville. The district is not nearly so good as that of his previous parish, and he would only be able to know its value after several years of experience. He was anxiously awaiting his first honey harvest and had only extracted 100 kilos. of honey when war was declared. There were still 150 to 200 kilos. remaining to extract from the well-filled supers, but he was deprived of this pleasure. On the 26th August, after five days' occupation by the Germans, M. Barottin left with his family and the majority of his parishioners, not to return until the 20th September. During this period of absence the village had been taken and re-taken several times, the church shelled, thirty-six houses burned and others pillaged, as well as all the hives in the district destroyed. He was prepared to sacrifice the honey in the supers, but hoped that the bees could have defended themselves. In this, however, he was undeceived, for when he returned it was to find his hives empty, upset, and partly burned, the frames of comb, some whole, others crushed, covered with bees, all over the garden and neighbourhood, the poor bees in search of some place in which to take refuge among the ruins. Bunches of bees hung like swarms on trees and bushes which, owing to lack of receptacles, had to be left to perish. Out of seventeen colonies only one remained, which, no doubt, had either defended itself or for want of time had not been destroyed by the robbers. M. Barottin is taking great care of this colony, from which he hopes to restart his apiary. The destruction was accomplished three days before his return, and he heard how it was done, for no doubt there must have been some bee-keepers among the robber soldiers. Covered with improvised masks, they lit torches of straw and rags, which were attached to long poles, and thus were able to smother or stupefy the bees, and take the combs, from which they squeezed the honey, which they put into any receptacles they could find. All the colonies in the parish were treated in the same way, and similar destruction took place in the neighbouring villages. M. Barottin's extractor was destroyed by shrapnel, and all his bee appliances have disappeared. He has been obliged to leave the vicarage, as it

has been rendered uninhabitable through being shelled, and the Sunday services have to be held in the granary of his new lodging place.

The sympathies of all bee-keepers must go out to our suffering brethren in the invaded districts, and it is difficult to realise that this terrible barbarity and destruction is going on within a few miles of our own shores.

Extent of Bee's Flight to Pastures at a Lower Altitude.—M. J. M. Gouttefangeas, in a discussion in the *Revue Eelectique d'Apiculture* on the distance bees fly to their pasturage, says that he has remarked that his bees, situated at an altitude of 1100 metres (3609 feet), never descend in spring to collect nectar from fruit trees situated at a distance of only two kilometres ($1\frac{1}{4}$ miles). They prefer to remain inactive to running the risk of not being able, when laden with nectar, to ascend the steep slopes of the mountain. Whatever explanation may be given, it is a fact that bees are not able to forage invariably at a distance of 4 to 5 kilometres (2 to 3 miles, about). It is not because they have better pasturage nearer at hand, for M. Gouttefangeas has observed that at such times when fruit trees are in full bloom lower down, the majority of the bees in his apiary remain inactive, some only occasionally visiting the few flowers scattered in the adjacent woods or in open spaces. They practically do no work when there is actually within reach a bountiful pasturage in which others of their companions are revelling. Last year he thought that possibly he might have made a mistake. The yield of nectar from whortleberries commenced on May 24th, then suddenly it was stopped by three weeks of cold, rain, hail showers, and snow. Fine weather returned on the 10th of June, and to his astonishment M. Gouttefangeas observed activity in his apiary which denoted an abundant flow of nectar. Where did the bees go, for he thought the whortleberries had closed their corollas and raspberries had not opened theirs? Was it possible that the bees had been down to the fruit trees? It was nothing of the sort, for a visit to the forest showed that the bees were hard at work on whortleberry flowers, which the three weeks of cold had not destroyed, but had simply suspended with the vegetation the formation of nectar in the flower, which had commenced to flow again, and the bees were simply resuming their work exactly where they had left it off twenty days before. The conclusion arrived at is that bees placed in mountains do not descend more than 250 to 300 metres. The reason given is that their instinct teaches them that if they descend it would be difficult for them to rise laden to their hives situated so high. M. Métais was able to throw some interesting light on this theory, which tends to corroborate the experience of M. Gouttefangeas. Near the apiary of M. Métais at Saite-Soline there is a field of sainfoin, and between the two a grove of tall poplars. Notwithstanding the short distance of five or six hundred metres (546 to 656 yards) which separated the apiary from the field of sainfoin, the bees do not visit this splendid pasturage, the reason suggested being that the bees do not fly through the wood but usually rise above it; the poplars being too high they prefer to neglect the treasure situated on the other side than to run the risk of perishing in rising over the trees.

DERBYSHIRE NOTES.

I speak from memory only, not having made notes from year to year for my future guidance, but I cannot remember during the last fifteen years, a season which appeared so backward at the beginning of May as did the present season. My bees certainly seemed to be at least a fortnight behind their usual time. Since then great changes have come upon the scene, and I can write that never have my bees been so forward as they were at the beginning of June. Ordinarily, the May honey flow in my district is merely enough to give a gentle stimulation to the bees in preparation for the flow from the clover in June. This year not only has it stimulated the bees to breed, but has sent them well into supers, so that for the first time I have been able to take off honey before the end of May. From appearance, taste, and my knowledge of surrounding crops, I judge that this honey is mainly from sycamore, in which bees are still working, although the crop is rapidly passing away. Trees of this variety vary greatly in their flowering periods. Some were in full bloom before apple blossom could be seen, others, long after apple blossom has disappeared, are just in their full glory, whilst the earlier ones have long been in seed. Even where not present in quantities great enough to ensure a surplus of honey in the supers, they help considerably to bridge the gulf of time between fruit bloom and clover, and for that reason alone I look upon them as one of the best bee flowers.

Now (June 13th) I see that white clover is making its appearance along the dry patches by the road-side, so that I expect in a week we shall have the main honey-flow upon us. But the weather is terribly dry, and a good soaking of rain

is required to ensure that to which we are all looking forward—a good flow from the clover.

Swarms have been pretty numerous and of good size. All round the district I can hear of them; some have been successfully hived by their owners; others have disappeared only perhaps to turn up in another district to enrich someone, who, having lost all his bees, has left his hives open to attract stray swarms. I have seen such cases, and have heard of others on unimpeachable authority. Oh! for that Diseases Bill to make such a proceeding a crime. A man who, in these times of "Isle of Wight" disease can leave his infected hives open, not only does not deserve a swarm but deserves a heavy fine for his questionable behaviour. He injures his neighbours in a double sense. He robs them of their swarms, and causes their bees to become infected by disease germs.

I have seen the ravages of "Isle of Wight" disease in this county during the last few weeks. In some cases one is inclined to say, "Serves him right; he never ought to have bees." I refer to those people—I do not call them bee-keepers—who wait for the expert to put on supers and to take them off, whose hives are covered with the cast-off clothing of the last ten years or more, who take all they can from their bees and give nothing back, and then begrudge a small subscription to the local association. They are totally ignorant of the least knowledge of bee-life, and are a danger and a menace to all good bee-keepers. It may be a drastic proceeding to advocate, but such keepers of bees should be suppressed by law.

There are others, often merely working-men, who have invested their hardly-saved shillings in bees and have been obtaining good interest upon them whilst gradually gathering together a small apiary. Their bees also, in spite of the greatest care and cleanliness, have gone under. One such bee-keeper said to me, "It is not the money loss I bother about so much, although that is nearly twenty pounds, but I cannot bear to think that my bees, which worked so hard for me last summer, should have gone during the winter and spring. Has it been my fault; is there anything more I could have done?" Such bee-keepers will rise superior to misfortune given time enough but I am afraid the "old guard" will never again see the bee garden full of hives. It is a tragedy—a tragedy of millions—and it might have been well in hand years ago. —D. Wilson.

QUEEN REARING AND INTRODUCTION.

(*Continued from page* 180.)

At times a queen cell will be found intact and of normal appearance, even after the young queen has commenced to lay. When this is opened it will usually be found empty; occasionally it contains a worker. I have both seen and also had many of the latter sent to me as curiosities. When examined it will be found that invariably the worker is head downwards (Fig. 15), instead of in the normal position. This unusual occurrence is caused by the cap being pushed into its original position by the passing workers, on account of the crowded condition of the hive. They then unwittingly make good the damage, and the cell assumes its normal appearance. If this sealing happens when a worker is inside cleaning the cell it cannot get out and dies of starvation.

After considering the points mentioned, it is obvious that queen-rearing should be commenced two seasons ahead, so that proper selection can be made, and not as is so often stated, in the spring of the year they are required. The mother of both queens and drones for breeding purposes should not be less than two years old, as at that age they are properly matured, and a record of their suitability and qualifications is available. Although the queen is at her best in the second season, it is often desirable to keep mothers of a good strain up to five years for breeding

purposes only. The stock will probably fail to give surplus, but this loss is compensated many times over by the good work of her progeny in the other hives.

After having selected the breeding stock, any of the following methods of rearing queens may be adopted.

In the early part of the spring commence to stimulate both the stock for queen-rearing and the one for drones, either by bruising the cappings covering the food if an abundance is present, or by syrup in a bottle-feeder if it is scarce.

When both stocks are strong insert into the centre of the brood nest of the one selected for drones a frame fitted with a sheet or starter of drone base foundation; this will be quickly drawn out and the cells filled with eggs. A fortnight after the eggs are laid, insert in the middle of the brood nest of the queen-rearing stock a split top frame, fitted with a full sheet of foundation, unwired. This I find preferable to a fully drawn empty comb, as the queen selects newly-built cells to lay in before old ones, so that the eggs are obtained sooner and in practically every cell.

Fig. 15.

As soon as the comb is built and eggs laid in the cells, remove the queen. She is best preserved by making a nucleus, and standing it beside the parent stock, so that after the queen cells are obtained it can be united for obtaining other batches of queen cells. The details of the operations to be carried out are fully illustrated in Fig. 16.

Two days after take out the prepared comb and cut away a strip about two inches deep right across the bottom (No. 1), at the same time, with a conical-shaped piece of wood, enlarge the opening of a number of cells each containing an egg along the bottom edge, as seen in the same illustration. The reason for having the comb unwired so that it can be cut to obtain the queen cells, and to remove them after they are built, is now apparent.

Carefully examine all the other combs, and, if queen cells, or their commencements are found destroy them. This can be accomplished satisfactorily only by shaking the bees from the combs, as described and illustrated on page 373, *British Bee Journal*, 1914.

It is also advisable to make another examination for queen cells on the sixth day after the removal of the queen.

The bees will make the enlarged worker cells into queen cells (No. 2), and as these contain eggs, proper feeding of the larva on chyle food during the whole of its babyhood is ensured. When sealed over the cells can be cut out and given to nuclei to hatch out or put into stocks that require requeening after having first made them queenless.

The ideal method is to place the cell in its natural position. This is done by turning the comb upside down on a table, then with a sharp pen-knife, which should be slightly heated in hot water so that it cuts the wax clean without pulling, which a cold knife will do sometimes no matter how sharp it may be. Hold the frame steady with the ball of the thumb on the bottom bar, place the fingers at the back of the cell to be removed (No. 3), cut it out with a dovetail base (No. 4) seen enlarged at No. 5.

Now take the comb of brood into which the cell is to be inserted, lay it flat on the table, put the cell in position to act as a template, and cut round it (No. 6) so that a hole is left (No. 7) into which the cell fits and hangs in its proper position by the points of the dovetail base (No. 8). Care must be taken to cut the point of the apex lower than the cell so that the princess can get out.

(*To be continued.*)

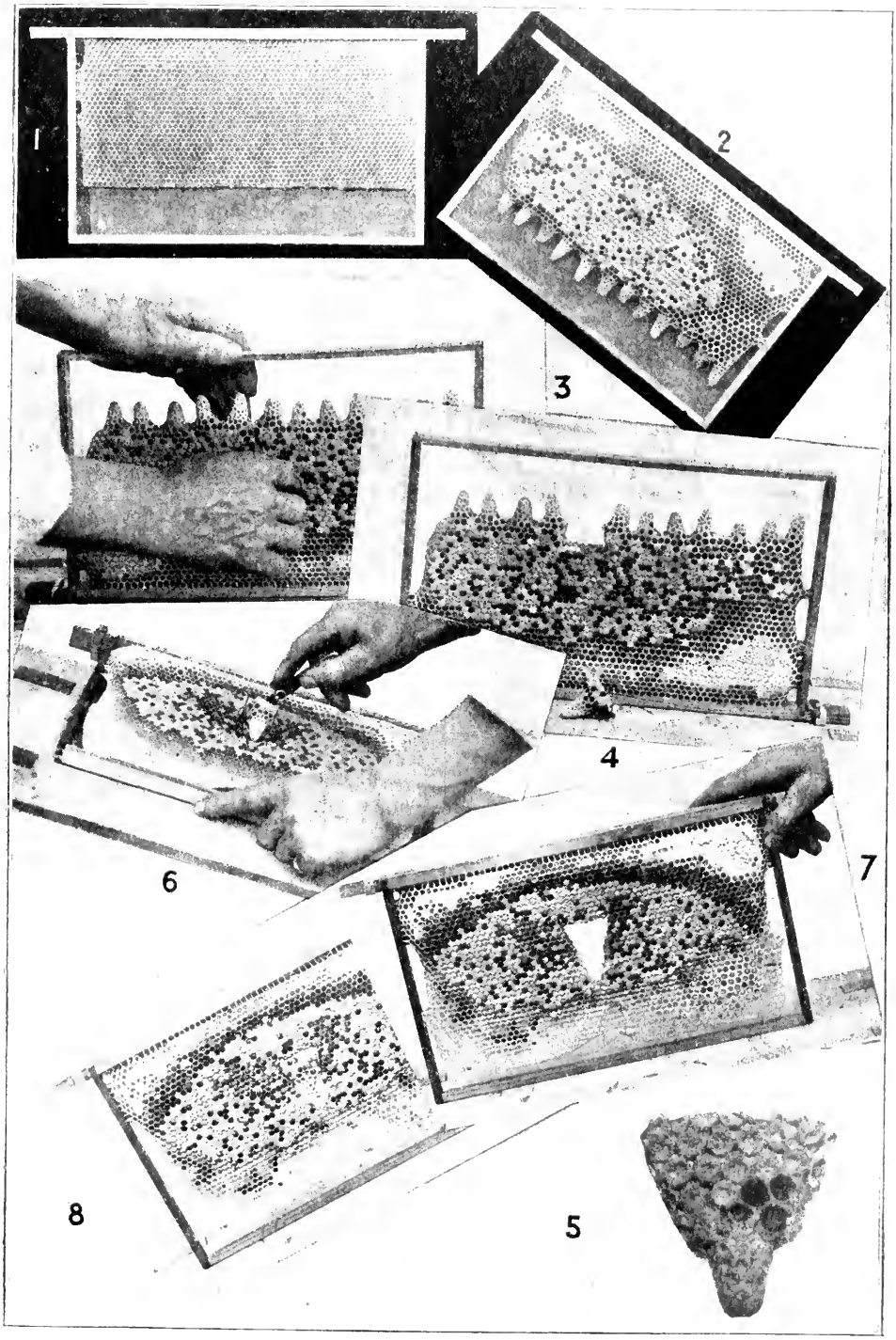


Fig. 16.

REPORT FROM NORTH NOTTS.

I am sending you a short report from this district. I think this has been the best time for bloom that I have known—chestnut, sycamore, and hawthorn in profusion. My three stocks are doing well and ready for second supers. A neighbour has, however, beaten me, as I have extracted about 25lbs. of honey for him to-day (June 10th), and it was only on Whit Monday that the supers were put on his bees and my own. It is grand honey—light, good flavour, and very thick. What we need now is a good rain for about twenty-four hours to bring the clover on. I was sorry to hear the vicar of a village some few miles away has lost sixteen stocks from "Isle of Wight" disease. I hope it will not come any nearer here. We all enjoyed the "Extracts from an Expert's Diary" last week. Well we remember the old motor-cycle and the "sparking plug.

Since writing the above I have extracted 50lbs. of honey from two supers. This is early for this district, as we do not usually have any honey ready to extract before the last week in June.—T. MARSHALL, Ivy Cottage, Sutton-on-Trent.

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

"ISLE OF WIGHT" DISEASE IN KENT.

In compliance with the wish expressed at the annual meeting at Crayford in March last, I have made numerous enquiries, not only in this district but also in other parts of the county, as to the extent of the "Isle of Wight" disease.

The disease was first recognised in 1911, and is believed to have been introduced into the Greenhithe district by the importation of bees from Hampshire. From that time the disease spread rapidly until within three years practically all the native bees had succumbed. During 1912 and 1913, when the epidemic was at its height, over 250 colonies belonging to our members are known to have perished. Since then no serious efforts appear to have been made to restock, except by several of our members in the Eltham, Bexley, Southfleet, and Swanley districts. In these localities bees chiefly of the Italian and Dutch strains have progressed remarkably well, and with one exception, no sign of the disease has reappeared. Mr. Shaw, at Eltham, has secured excellent results with Italians. Dutch bees are not favoured owing to their excessive swarming propensities, but they have proved useful for building up an apiary.

In the Gravesend, Higham, Northfleet, and Southfleet districts, Mr. Rivers informs me several imported stocks contracted the disease and died during the past winter, or have since been destroyed. Those colonies remaining appear healthy, and are doing well. At Goudhurst and Horsmonden many stocks perished.

At Bromley there has been considerable loss, while in the Darent Valley, from Eynsford to the Thames, there are very few stocks remaining, but these are now in a flourishing condition. The few colonies at Longfield and Hartley are also doing well.

As far as I have been able to ascertain the extreme eastern part of the county, the Smarden district, and the West Ashford district, appear to be the only areas unaffected. Mr. Darlington informs me that although the disease has appeared in districts east of Ashford the western side is free, and all the bees are flourishing. He hived a seven pound swarm on May 8th.

In the Canterbury district Mr. Head reports that to his knowledge over fifty colonies perished during 1914, and many more died during the early months of the present year. Many bee-keepers had lost all their bees, while others had only two or three stocks left. The outlook there for 1915 did not appear hopeful.

At Maidstone and environs, where bee-keeping is extensively followed under the Mid-Kent Association, Mr. Roberts tells me there is hardly a stock left; he having lost all but one from a total of 120. The disease was very virulent in 1913, and in 1914 several people restarted, but their bees all died before Christmas. The disease gradually extended to Sittingbourne and along the Medway Valley to Snodland, Cuxton, Rochester, and Chatham. In Bearsted several stocks survived by the introduction of Italian queens. At Smarden in the Weald the bees have apparently escaped.

In the southern parts of the county there has been much loss, but as the bee-keepers there are not organised it is difficult to obtain precise information as to the extent of the disease. General Sir Stanley Edwardes, at Sandhurst, states that there were eight bee-keepers in his immediate neighbourhood; five apiaries had been wiped out, and as far as he knew there were only five stocks remaining. The disease did not appear there in its virulent form.

From the evidence at hand it appears that the disease is travelling eastwards. It is certainly not so virulent here as it was twelve months ago, and it is believed that with care in the selection of bees of a suitable strain restocking could be undertaken with every prospect of success.

A number of our members recommenced during 1914, either by introducing new varieties or by catching stray swarms, and in nearly every case the bees have done well.

CO-OPERATIVE RE-STOCKING SCHEME.

Since this scheme was suggested in July last circumstances have arisen, due to the war, which make it impossible to carry it out in its entirety this season. However, a number of stocks of healthy bees have been obtained, forming a nucleus apiary with which to commence operations early next year.

SUMMER MEETING.

The first summer meeting of the Association will be held on Saturday, June 19th, at 5.30 p.m., at the Association's new apiary, which has been established (by kind permission of Mr. Knight) at Maypole House, Dartford Heath (near Bexley Asylum). Main entrance, 12 minutes from trams, Station Road, Crayford.—GEO. W. JUDGE.

SWARM PREVENTION.

G. M. Doolittle ingeniously likens the swarming impulse of bees to a broody hen. While agreeing that the similitude is perfect, I am not in sympathy with his method of eliminating the broody condition. A wide experience with poultry has taught me that a pullet of a good laying strain will seldom become broody during her first season, and an equally wide experience with bees has taught me that queens are less inclined to broodiness and voluntary supersedure (which is the direct cause of swarming) during their first season. While this trait in bee nature is not sufficiently developed to warrant depending upon ordinary methods of supersedure for swarm prevention, I have ascertained that a correct method of queen supersedure is the more safe and economical solution of the swarming problem. The question is, how shall we prevent swarming with the least expense for labour and equipment, the most important factors in the economics of honey production?

While the broody condition that usually culminates in swarming is shared by bees and queens alike, we have found that the remedy is more effective and much more economically applied to the queen with as little disturbance of the brood and bees as possible. These are excessive manipulations that multiply the cost of honey production. We learned a long time ago that destroying queen-cells to prevent swarming is equivalent to shooing a broody hen off the nest to prevent sitting, and that both are a waste of time and energy, for the broody hen will return to her nest, and the broody queen and bees to their queen-cells. Dropping the analogy relative to the hen, the question is, "What is the more economical and practical method of eliminating this natural condition of broodiness that usually results in swarming?

Shall we resort to the excessive manipulation of hives and combs, removing brood that will soon become bees, and peddling them promiscuously about the apiary, all of which excessive manipulations are involved in the shake-swarm method advocated by Mr. Doolittle? or shall we practise the equally laborious method of removing queen-cells once a week, involving excessive labour in manipulating brood-chambers heavy with supers, as advocated by R. F. Holtermann and others, or, shall we practise dequeening with its deleterious effects upon the working qualities of bees, likewise involving excessive manipulation of brood-chambers heavy with supers, to detect signs of swarming? I repeat it, Shall we resort to the abnormal condition of queenlessness with its psychological depression upon the energies of bees, as advocated by Dr. Miller?

Is such excessive labour conducive to economical honey production, the desideratum of every method of bee-keeping? Since swarming is a natural impulse, it is imperative to combat it wth purely natural principles. Assuming that all preconstructed queen-cells are supersedure cells, the supposition is that their construction indicates a desire for a young queen. This supposition becomes an established fact when the correct method of requeening eliminates queen-cell construction with its attendant evil "swarming." Here is the method, requiring as much time to do it as to name it. "Remove the queen and insert a ripe queen-cell, removing cells while looking for the queen."

The story is told in sixteen words, and the operation is performed in as many minutes. If done with a strong colony at the beginning of clover harvest, swarming is prohibited by a combination of purely natural forces; and the desire for a young queen being satisfied, the colony will work with a vim and energy that denotes contentment and satisfaction—a psychological condition that cannot be maintained by combating nature by abnormal methods. I might deliver a long discourse explaining the philosophy of the principle, which might be only theorising, hence I will only say, "Try it and be convinced."—J. E. HAND, Birmingham, Ohio, from *Gleanings in Bee Culture*.

HELP FOR A BEE-KEEPER.

We have received an offer to help any bee-keeper who has gone away from home and joined the army or navy to serve his King and country and has left no one behind able to look after the bees. In response to an enquiry we have received the following note, and will be pleased to forward any communications addressed to care of this office:—

My offer to help is, of course, free, and I could really go almost anywhere I was of use. If you think it advisable perhaps you will put a note in the JOURNAL to that effect.—Yours truly, H. H. WOOSNAM.

"B.B.J." for SOLDIER OR SAILOR.

We have received another offer of the "B.B.J." weekly in the following note. Will any of our readers who know anyone who would like to take advantage of Mr. M. Kennedy Bell's kind offer please communicate with him:—

If you know of any bee-keeper, either in Navy or Army, who would like the JOURNAL sent every week, I would be very glad to send mine on.—M. KENNEDY BELL, Romsdal, Walton St. Mary, Clevedon.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

A PROLIFIC QUEEN.

[9150] I have more to report on this prolific lady (see BEE JOURNAL, June 3rd, 9145). I have had four more lots from the hive which went in on May 5th as a swarm and taken off a rack of sections. In all nine useful lots from one stock, as follows: May 5th, a swarm; 17th, the first cast; 19th, the second; 24th, the third; 29th, a swarm from the swarm of May 5th; June 6th, the first cast; 8th, the second cast; 11th, a third cast and a rack of sections; 13th, the fourth cast, and as I said before, all useful lots, covering four to five frames when hived. Can anyone beat this?—WM. S. HALFORD, West Wratting, Cambs.

USING IZAL.

[9151] *Re* use of Izal in your issue of 3rd inst., I wish his Reverence had given us amateurs particulars as to strength to use and other minutæ—such as should it be used in the hives, also as a preventative. I have been advised by some to *burn* the hives; others say "not at all." Could you kindly give us something definite as to what action to take, both as a preventative, and also if this dreaded "Isle of Wight" disease gets in our "flock"?—FRANK MOORE.

[You will find directions for using Izal in the advertisement on page iii. Mr. Simmins recommends 1 teaspoonful of Izal to 1 pint of water. The alighting-board and also bees and combs may be sprayed. This will help to prevent "Isle of Wight" disease, but should a colony become affected with the disease, it is best to burn it. Hives may be disinfected. See the BRITISH BEE JOURNAL for May 27th and June 10th for an article on preventing "Isle of Wight" disease.—EDS.]

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

CORNUBIA (Cornwall).—*Queen Cast Out.*—She was old and worn out and has been superseded.

"DEVON" (Paignton). — *Extracting Unsealed Honey.*—If you leave it on the hives long enough the bees will seal it over. If extracted, you may do as you suggest, but keep it in a warm, dry place. The aroma and flavour will not be so good as when ripened on the hive. It will have a tendency to ferment, and for this reason should be used as soon as possible.

NIMROD (Wexford).—*Symptoms of "Isle of Wight" disease.*—In the early stages the affected bees become restless, leave the cluster, and crawl out of the hive timidly, sometimes with more or less distended abdomens, and frequently their wings are dislocated. They lose their power of flight, drop on the ground, collect on stalks of grass or lumps of earth, and sooner or later perish. In severe attacks large numbers of bees will be found crawling on the ground for several yards round the hive. If you apply to the Board of Agriculture and Fisheries, 4, Whitehall Place, London, S.W., for Leaflet 253, "Microsporidiosis of Bees," it will be sent post free.

You may know whether the queen is all right or not as soon as the brood is sealed over. If she is not fertilised the larvæ, even in worker cells, will be covered over with the projecting drone cappings.

H. N. (Herne Bay).—We do not know that strychnine has been used for the purpose, nor should we care to recommend the use of such a deadly poison.

ANXIOUS ENQUIRER (Hinckley).—They were suffocated. If necessary to leave a swarm confined in a skep for a day, a piece of cheese-cloth should be tied over it and the skep stood in a cellar or cool place, upside down with the cheese-cloth uppermost, thus allowing the heated air to escape.

W. S. H. (Cambs.).—Put them in an airtight chamber or box, on the floor of which place a saucer or other shallow vessel containing 40 per cent. formaldehyde, about 1 tablespoonful to the space occupied by four boxes of shallow frames, close securely, and leave for at least forty-eight hours.

A. G. PARKER (Great Malvern).—(1) You cannot follow a better plan. Make certain the queen is on the new combs before placing the queen excluder in position. (2) Yes. Do it as early as possible. We should prefer to take the skep away as soon as possible and put sections of shallow comb on the hive. (3) Mr. J. P. Phillips, Spetchley, Worcester.

Honey Sample.

G. HOUGHTON (Alfreton).—The honey is mainly from clover. It is not quite up to show standard.

Suspected Disease.

G. H. H. (Haddington).—The bees were too dry for diagnosis.

A. B. Y. (Gotherington).—It is "Isle of Wight" disease. Yes, quite possible.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 29th to July 3rd, at Nottingham.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretaries, 23, Bedford Street, Strand, W.C. **Entries closed.**

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	£26	15	6

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1*d. per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3*s. per* ½*in., or* 5*s. per inch.*

PRIVATE ADVERTISEMENTS.

FOR SALE, owing to removal, stocks, 4-frame nuclei, hives, quantity 28lb. and 14lb. tins, excluders, racks, sundries.—J. BOWDEN, Broomhill, Witley, Surrey. v 13

SWARMS FOR SALE, from 10-frame hives, guaranteed healthy, 11s. 6d. firsts, 8s. 6d. seconds; deposit; f.o.r. in skeps, returnable carriage paid, or 2s. extra.—PEARCE, Victoria-parade, Leckhampton, Cheltenham. v 12

FOR SALE through lack of room, one White Star Italian swarm, 12s. 6d., 1915 queens.—CROWE, Stawell, Bridgwater. v 10

WANTED, extractor, ripener; state size, maker, when bought new.—F. O. RICHARDS, Nythfa, Aberavon. v 9

PURE Italian fertile queen, 5s.; immediate despatch.—CADMAN, Codsall Wood, Wolverhampton. v 8

LADY acquainted with bees, poultry, and work, offers unpaid help on farm; could board herself.—Box XX., "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 7

WANTED, an extractor for small apiary, in good condition.—A. TROWSE, 51, Eade-road, Norwich. v 5

FOR SALE, colonies and swarms, healthy, and good workers; overstocked.—MRS. WALLACE, Rack House, Halberton, Devon. v 3

HONEY, good quality, in 1lb. screw top bottles, 8s. dozen; also sections, 8s. 6d. dozen.—COWELL, Sheringham, Norfolk. v 2

STOCK of Italians, ready for super, with hive, 30s.—LEDGER, 14, Newstead-road, Lee. v 1

FOR SALE, six dozen shallow frames, metal ends, wired, and drone base foundation, price 25s.—Apply, S. COCKS, Napton Locks, Rugby. v 91

FOR SALE, motor bicycle, Ormonde, £6; tricar, Humber, £20; or exchange for bees.—WHITEHEAD, Eccleshill, Bradford. v 93

FOR SALE, fifty W.B.C. hives, good condition, 5s. 6d. each to clear; 500 split top section frames, treadle saw-mill.—MRS. OWEN, Risby, Bury St. Edmunds. v 90

SALE, honey, excellent quality, granulated, last autumn's, in 28lb. tins; sample, 3d.—COLE, Roxholme, Sleaford. v 86

BARLOCK TYPEWRITER (foolscap); 25-egg Stanton incubator; Wright's "Book of Poultry"; Cassell's "Popular Educator"; breeding pen White Leghorns (Hunter-Pyne strain), cash offers, or exchange 3 or 6-frame Lee's observatory hive, extractor, ripener, guaranteed healthy swarms.—Box 2, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 67

FEW STOCKS FOR SALE, 30s., or £2 with hive, young queens, no disease in district.—GRANT, Huyton, Lancs. v 69

CWT. granulated honey, in bulk, 60s.; this season's dark honey same price, f.o.r.—DAVIES BROS., Nurseries Apiary, Aberayron, Cardigans. v 73

TWO nearly new W.B.C. hives, three shallow frame boxes, and lifts to both, 10s. 6d. each, worth double; several accessories.—H., 21, Lansdowne-grove, Neasden, N.W. v 78

WANTED, pupil-assistant on 14 acre fruit and bee farm, must have some previous experience, salary according to ability, references given and required.—Apply, PROPRIETOR, Overbury Fruit Farm, near Tewkesbury. v 60

SWARMS for sale, 15s., carriage free in non-returnable boxes.—NORRIS, Cashel. v 54

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

HAVING obtained larger one, will sell Green's 10in. lawn mower, 8 knives, and grass box, 25s., or offers, in excellent condition.—HERROD-HEMPSALL, Apiary, Luton, Beds.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, cloth bound copy "Bee-Keepers' Record," Vol. 7, year 1889.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

THE JERSEY BEES HAVE ARRIVED.

ONLY a few stocks left for disposal; early application should be made to prevent disappointment.—Particulars, MANAGER, BRITISH BEE JOURNAL.

MOVING apiary, must clear.—About gross extracted shallow frames, 5s. dozen; racks, 1s. extra; twenty empty section racks, 1s. 3d.; a few fitted full foundation, 3s. 6d. each; fifty W.B.C. hives, with lifts, 10s. each.—E. F. J., "Bee Journal" Office, 23, Bedford-street, Strand, W.C.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

WILKES' free-way excluder and non-swarming method have resulted in enormous takes of honey; sample excluder, 2s.; illustrated work explaining prevention of swarming, with many photos, 1s. 1d.; send for 1915 catalogue, all post free.—WILKES, Four Oaks, Birmingham.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

PURE bred heavy-laying pullets, noted strains: Orpingtons, White Wyandottes, R.I.R., Leghorns, Light, Speckled Sussex; guaranteed healthy, true to type, reasonable prices; eggs for hatching; day old chicks; write for particulars; also swarms and stocks of bees.—DOLLIS PARK POULTRY FARM, Church End, Finchley, London, N.

SECTION Glazing, lace paper strips, 7d. per 100; lace bands, 3in., 1s. 3d. per 100, post free; good section racks, slotted dividers, followen and wedge, complete, 1s. 6d., as new; also section racks, complete, 1s. 3d. each.—W. WOODLEY, Beedon, Newbury.

OFFERS, with price, invited for this season's honey, sections and extracted.—DAVID HANCOX, Deddington, Oxon. v 4

BRICE'S BRONZE MEDAL QUEENS (23rd season), special 7s. 6d., selected 5s. 6d., guaranteed.—BRICE'S APIARIES, Green-street Green, Orpington, Kent.

ATKINSON'S 1915 list, unequalled choice of the best British and foreign bees and queens; all particulars, stamp.—BEE FARM, Fakenham. v 6

"ISLE OF WIGHT" and Foul Brood.—Write for free descriptive booklet of our special remedies; also formaldehyde and tablets, naphthalene, disinfectants, &c., &c.—W. FIELDING, bacteriologist, 5, Bishop's-avenue, Upton Park, London, E. v 11

THE ROYAL SHOW.

We give our readers one more "reminder" that the Royal Show opens at Nottingham on Tuesday next. All who possibly can should make a point of attending the Show and paying a visit to the "Hives and Honey" department. Although we cannot at the time of going to press say with certainty what number of entries there are in the honey classes, we believe they will be equal in number to, if not exceeding, those at Shrewsbury last year.

The city of Nottingham is in a central position, with good railway facilities, and the attendance should be good, especially in view of the fact that there will be very few Shows this year. This will be apparent if a comparison of our "Bee Shows to Come" column in this issue is made with the corresponding issue of last year, where there is a list of twenty Shows. This year there are, so far, only two As bee-keepers have responded so well to the appeals made in our columns by making a goodly number of entries, it only remains to follow this up by a good attendance at the Show. We are looking forward to meeting even more old friends than usual in the native county of our Junior Editor and his brother, our Manager, who will both be present. We hope none of our readers will fail to pay a visit to the honey tent, and to use a somewhat hackneyed phrase, "Bring your friends with you."

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, June 17th, 1915. Mr. C. L. M. Eales presided, and there were also present Miss M. D. Sillar, Rev. F. S. F. Jannings, Messrs. G. S. Faunch, G. J. Flashman, J. Herrod-Hempsall, J. B. Lamb, A. Richards, J. Smallwood, G. W. Judge, and A. G. Pugh. Association Representatives, G. Bryden (Crayford), G. R. Alder, and G. Horscroft (Essex), and the Secretary, W. Herrod-Hempsall.

The minutes of Council Meeting held on May 20th were read and confirmed.

Letters of regret at inability to attend were read from Messrs. T. W. Cowan, W. F. Reid, T. Bevan, E. Walker, and H. Jonas.

The following new members were elected:—Mr. H. A. Stonard, Mr. S. G. Leigh, Mr. J. H. Scott, Mr. S. Leedham, Mr. H. P. Hull, Mr. A. C. Houghton, and Mr. A. M. D. de Groot.

The Crayford Association nominated Mr. Bryden as their representative, and he was accepted.

The report of the Finance Committee was presented by Mr. Smallwood, who stated that the payments into the bank for the month of May amounted to £14 3s. 10d., the balance at the bank being £191 14s. 5d., payments amounting to £85 6s. 2d. were recommended.

The Chairman said how pleased he was to see such a good attendance in these times of exceptional stress, and he sincerely hoped that every member of the Council would use his utmost endeavour to be present at the next Council meeting at the Royal Show at Notingham.

Swanley Horticultural College applied for a preliminary examination, and the same was granted.

Next meeting of the Council in the Secretary's Office, Hives and Honey Department, Royal Show, Nottingham, on Thursday, July 1st.

BRIDGNORTH AND DISTRICT BEE-KEEPERS' ASSOCIATION.

Some parts of this district have suffered with "Isle of Wight" disease. Several apiaries have been wiped out entirely, other localities have escaped, and there is the usual merry hum and the hives are booming with honey, so that on the whole there are prospects for a good harvest. At a meeting of the Association, held on June 11th, 1915, a good prize schedule was arranged, open to Shropshire, Staffordshire, and Worcestershire as follows:—Class I., 6 Sections of Comb Honey, 1st prize, bronze medal of Shropshire B.K.A.; 2nd prize, 5s.; 3rd, 2s. 6d. Class II., 6 Jars Run or Extracted, any colour, 1s. each entry, 7s. 6d., 5s., 2s. 6d. Class III., Open Gift Class, 1 Jar, to be sold by Association, 7s. 6d., 5s., 2s. 6d. Class IV., Open Gift Class, 1 Section, to be given to wounded soldiers, entry free, 7s. 6d., 5s., 2s. 6d. There are nine Classes for Members of the Association.—J. S. Lawton, Hon. Sec., 77a, High Street, Bridgnorth.

PROSECUTION FOR SELLING HONEY UNDER A FALSE TRADE LABEL.

A prosecution by the Board of Agriculture and Fisheries, before Mr. Mead at Marlborough Street Police Court on April 22nd, will no doubt be interesting and instructive to our readers.

F. W. Weitzel, trading under the name of The Globe Honey Company, was prosecuted for selling to Messrs. W. S. Chapman & Co., Ltd., honey under a false trade label, viz., "Pure Cambridgeshire Honey. Elsom & Co., Heydon Apiary, Royston."

Mr. J. Cornelius, one of the Board Inspectors, stated that he bought a jar of honey at one of the retail shops of Messrs. Chapman & Co. and submitted it to Mr. W. Herrod-Hempsall for his opinion as to whether it was honey or not and, if honey, its probable source. The opinion given was that it was a bad sample of foreign honey. He had also been present when a search was made of the defendant's premises, when, amongst other things, labels giving descriptions of various kinds of honey were found; these were submitted to the magistrate. Some foreign honey was also found.

Mr. W. Herrod-Hempsall stated:

On the 12th inst. Mr. J. Cornelius, General Inspector of the Board of Agriculture and Fisheries, called upon me at 23, Bedford Street, Strand, W.C., and produced a jar of honey to which was affixed a label bearing the words "Pure Cambridgeshire Honey. Elsom & Co., Heydon Apiary, Royston." He opened the jar and invited me to express an opinion upon the contents. I examined the contents, and came to the conclusion that it was not English honey. At his request I accompanied him to No. 234a, Great Portland Street, London, a grocer's shop in the occupation of W. S. Chapman & Co. In the doorway was a basket containing jars of two different sizes, to each of which was affixed a label bearing the words "Pure Cambridgeshire Honey: Elsom & Co., Heydon Apiary, Royston." On the top of the basket containing the jars was a large label bearing the words "English Honey: Small Jars, 5½d.; Large Jars, 9½d." The words "English Honey" were printed in characters about 1 inch square, the prices being in larger characters. We entered the shop at 3 p.m., and Mr. Cornelius asked the counterman, whose name was subsequently said to be John Sheldrick, for a large jar of honey, and was supplied with one of the jars out of the above-mentioned basket. The purchase being completed, Mr. Cornelius enquired for the manager. When the manager, whose name was said to be Joseph Carroll, appeared, Mr. Cornelius informed him that he was an Inspector of the Board of Agriculture and Fisheries, and that having reason to doubt the correctness of the descriptions on the label over the basket and on the label on the jar, he had purchased the jar on behalf of his Department, with a view to possible proceedings under the Merchandise Marks Act. He then asked if the jar contained English honey. The manager did not reply to the question, but suggested that Mr. Cornelius should see the managing-director of the company at 62, Aldersgate Street, London, E.C. Mr. Cornelius then removed the cover from the jar and showed me the contents. In my opinion it was not English honey. Mr. Cornelius then replaced the cover on the jar and sealed it with the seal of the Board of Agriculture and Fisheries, and took it away with him.

Mr. G. Hayes, of Beeston, Nottingham, after answering questions as to identification of himself and position as regards ability in the matter, was asked for his reason for concluding the sample of honey submitted to him was foreign, and stated that—

(1) The honey contained a large number of pollen grains from eucalyptus, and that the predominant flavour of the honey was of that plant.

(2) The honey contained other pollen grains which he had not found in British honeys.

(3) The frequency of pollen grain was greater than in English honey.

(4) There was a lack of certain pollen grains which are to be found to a less or greater extent in all English honeys.

(5) He also submitted photo-micrographs of pollen grains from the honey in dispute, and also from a sample of what he knew to be Cambridgeshire honey.

Counsel for defence asked if eucalyptus was not grown in greenhouses and gardens in England, and whether the honey might not have been gathered from that source?—No.

Whether some of the English pollen grains were not similar to those found in the sample?—Fairly so in general form, but not in details of markings and measurements.

What caused the greater frequency of pollen grains in foreign honey?—Yielded more profusely, and method of extracting honey.

Mr. Goodrich, an experienced bee-keeper and traveller for a firm of honey dealers, also gave evidence to prove that the honey was not English, let alone Cambridgeshire.

A police constable was also called to prove that the defendant had not kept bees for several years at Heydon.

All the witnesses were severely cross-examined by the defendant's counsel without gaining a single point. Samples of different kinds of honey were submitted to Mr. W. Herrod-Hempsall when in the witness-box to see if he could name their source. This he did correctly.

After counsel for the prosecution had made his speech, the defendant's counsel stated that he was afraid he was in a very awkward position, for if even he were able to prove that the honey was English, it would be very difficult to prove that it was produced in Cambridgeshire; he therefore left the case in the hands of his Worship.

The magistrate intimated that the case had been fully proved, and fined defendant £10 and £10 10s. costs.

A LETTER FROM FRANCE.

BEES IN THE WAR AREA.

Enclosed is a letter from a friend in France. The writer started bee-keeping under Mr. Snelgrove, and later was with me for a few weeks. You may make use of any part of the letter; either the whole or extracts may be inserted.—D. WILSON.

"I think I'll write you a little article on "Bee Study Behind the Firing Line." I was on duty when I first discovered the hive, and it was dusk. The guns were booming their usual evening hymn and the rifles were spitting and cracking in concord. Troops were passing down the road in front of the house on their way to the trenches, and the whole atmosphere and surroundings spoke of war.

"One touch of nature makes the whole world kin" is certainly applicable to all bee-keepers, and once having seen the hive it was not long before I was searching for its owner. I soon found him, and pointing to the hive (which, by the way, is large enough for a good-sized dog) I murmured in an enquiring voice, "Bees"?

In a moment his face was wreathed in smiles, and in an eager, answering tone he replied, "Ya! Ya! You keep bees?" A moment later we were friends and sharing the contents of our tobacco-pouches, or, rather, he accepted a "Frenchman's pipe" of my "Three Nuns," and I refused a pipe of Belgian on the grounds that it was too bitter for my taste. I remained just long enough to arrange a time when I should be free to inspect the hive.

Unfortunately, I have not yet found the time convenient, but I have been able to have several long chats with this Belgian bee-keeper and to discover that he had another hive quite near the billet into which we have recently moved.

Now let me describe Monsieur Verhoille. By profession he is a cycle-maker, and before the war was in a very good way. He had his own shop and workmen, and by patient toil and thrifty habits had won for himself a good business. At the back of his shop was his garden, and here he kept part of his stock of bees.

He still has the shop, but his business is ruined—the war carried practically everything away—men, custom, money, tools, and in several cases even his bees. His wife is one of the nicest women I have met out here: a clean, careful, cheerful, patient, and motherly soul.

In the house are fourteen children, five belonging to M. Verhoille, and six to his married sister, who was the wife of a prosperous farmer whose farm once stood somewhere near Ypres—farm, buildings, crops, cattle, horses, husband, all gone, she will tell one with a sigh. The remaining children belong to the sister of Madame Verhoille. Once again war has brought ruin and desolation into a home, for two of the family were killed by shells, and the husband is fighting in the Belgian Army. To see the perpetual tears behind the eyes, so bravely kept back and repressed and disguised with a smile is one of the most appealing and yet bravest sights I have seen during the war.

Men I have seen momentarily brave, but to daily fight against sorrow, loss, ruin, prospective loss, and perpetual fear of "Allemand's return," and yet keep a smiling face to the world, is courage of the highest type.

M. Verhoille started bee-keeping when he was twelve, and has since had something like thirty-two years' experience. Before the war he had a dozen stocks, but four of these were destroyed by French soldiers, who, during the fighting, invaded the privacy of the garden, and after a short, sharp contest, where there was only one side in it, retreated in wild disorder, pursued by a relentless and merciless foe, whose attack was delivered with lightning-like activity.

The soldiers then resorted to strategy and delivered a night attack while their dreaded foe was resting. This time their victory was complete, for despite many casualties (although no deaths) they despoiled their enemy of his stores and, finally, completely destroyed his stronghold by fire.

Next morning the wounded were seen making merry on the spoil. They seemed proud of their wounds, and loud were the

shouts of laughter as each man exhibited them.

Four other stocks were kept near a little copse a mile nearer the firing line. These for a time escaped the ravages of war and survived the winter. Unfortunately, the copse afforded good shelter for artillery, and early in the spring a whole battery was posted on its edge and pounded away many shells both by day and by night. The noise was terrific, and the inmates of the hive crept closer together in fright. Few ventured out, and fewer still returned, for they had not only a terrible noise to encounter, but a tremendous gust of wind always followed, and against this none of them could fly. The result was that when the time came for the annual cleansing flight they were still afraid to venture forth, and died inside their home. Two stocks of a more adventurous turn imitated the action of many another victim of the war, and, deserting home, stores, comforts, set out to seek new homes in more peaceful surroundings. May they have been as fortunate as many another refugee has been, is not only mine but also M. Verhoille's ardent wish.

Well, last Sunday (16th) I inspected the hive near my billet. It is the same type as ours in England except that it is capable of taking fifteen frames instead of our English ten. M. Verhoille claims that this is an advantage, for during the autumn it can be made into a double hive and so many bees be raised to survive the winter. In early spring the bees increase with great rapidity, and then one of the queens is removed and the two stocks gradually merged into one by raising the partition about an inch. The two ends of the hive were glass, protected by hinged doors.

Brood raising was in active progress, for the little creatures were staggering up the alighting-board laden with grey, yellow, and red pollen—a sure sign of brood and a vigorous healthy queen.

We removed the roof of the hive, and I found that a super containing eleven frames was three-parts full already. This was placed in the hive on the 6th, so you can judge the strength of the stock when I tell you that during that time we have had three days' heavy rain.

We removed this to look into the brood-chamber, which, by the way, is covered with strips of wood instead of quilting. Here we found stores of pollen and worker-brood in every stage of development. Drone brood was also well forward, but these were carefully uncapped, and before we left the workers were busy dragging the slaughtered nymphs out of the hive.

There were twelve frames in all, and two more were added to the centre.

The queen, which, by the way, we failed to find, is the offspring of an Italian-Belgique mother, crossed again with a Belgian drone, and is in her third and last year. This, M. Verhoille thinks, is the best cross for the district. He informs me that the Belgian bee is most suited for the months of April and May, but is indolent during June and onwards, when the pure Italian is at its best, as it cannot stand the cold of the two preceding months. Another drawback to the native bee is its inability to work the clover on account of its relatively short tongue. Hence, by a judicious cross a bee is bred capable of working the clover and withstanding the cold of April and May and possessing the June and onward activities of its Italian ancestors.

In a good year a stock will produce between 25 and 40 kilos. of honey, which sells at 3fr. per kilo.

The district is not so good as that of Ostend, where much heavier yields are obtained, particularly, I believe, from the flowers of the Leguminoceæ family.

The guns roar, the rifles crack, men make night and day hideous and hellish, but the gentle forces of Nature sweep on, and with a kindly smile she encourages her smaller children to toil on. The war came and the war will go; men live, men die; they alter the boundaries of nations; they destroy a village here and a town there; kings are made and unmade. The might of man is great, and within the unfolded leaves of history he is destined to become greater and more mighty, but with all his might and with all his strength and with all his cunning and learning, he is powerless to alter the gentle, silent but certain workings of the multitudinous forces and mysteries which we designate as Nature.

A thousand years hence, when this war is a dim remote speck on the distant horizon of time, these forces will still be at work, and the sun will shine and the flowers will bloom, and the joyous hum of the busy bee will make glad the heart of thousands of, as yet, unborn bee-keepers.
—F. T. Gardiner.

EXTRACTS FROM AN EXPERT'S DIARY.

By J. Herrod-Hempsall.

Many bee-keepers have an idea that the only time the visit of an expert is of any service is either in the spring or autumn; in the first case, to know if the bees and

brood are healthy, and if they need feeding, and, in the autumn they want to know if any feeding is needed, and if so, how much, very necessary things to know; but there are plenty of opportunities to make mistakes, or for puzzling propositions to arise between those two periods—especially with a beginner. I have seen brood chambers and shallow frame boxes placed upside down, and in one case a rack of sections was placed in that position, and the queen excluder above the section rack; swarms will be hived on drone base foundation; two way sections fixed into the rack on their side thus preventing the bees gaining access to the sections; swarms are hived without any quilt on the top of the frames, and the bees go right through and commence building operations in the roof. But the mistake made by the greatest number of bee-keepers — many of them not amateurs—is in not fixing the foundation securely in the frames, more especially in brood frames on which it is intended to hive a swarm. The majority of bee-keepers use those abominations, split top bars, and an amateur often deems it sufficient to just insert the edge of the foundation through the slit—no wire or nails through the top bar—the result is that as soon as the four or five pounds of bees begin to cluster on it the whole lot of foundation tumbles down on to the bottom bars, not flat but in an infinite variety of folds and convolutions, and the bees commence to build out the comb in that position, and when a few days afterwards the owner opens the hive to see how the bees are doing, he is staggered to find the hive half-full of a kind of honeycomb rockwork, instead of the beautiful level slabs of comb he expected. He has not the slightest idea how to set about rectifying matters; the text-books are all silent on this point, and so, unless he has a brother craftsman near, or the expert happens to call, he simply lets things take their course. I have many times helped bee-keepers out of this kind of difficulty, sometimes when a swarm had only been hived a few days; at others when they have been left a year or more. I always made a point of suggesting that any swarm that had been hived should be examined, and though an expert is not expected to do the work, but only to give advice, I found that it was less trouble to do the job than try and explain how it should be done, and the lesson was also of much more value to the bee-keeper. Hiving swarms without any quilt on the frames is not done so often, but on several occasions I have had the pleasure of cutting comb out of the roof when that mistake has been made. I say pleasure advisedly, for to me there is something that I like in doing a job of that kind. It is messy I admit, possibly the fascination lies in overcoming the difficulties. The same thing applies to evicting a swarm from a roof or a hollow tree. Sometimes through neglect the quilts are allowed to become too "holy." Bees appear to have a fondness for gnawing the quilt, and then when the combs are uncomfortably crowded, and their owner has not provided shallow combs or sections, the roof is filled with honey, and more than once I have had to use a crow-bar, or strong "cold" chisel to liberate the roof. The last time I had this job was in the spring of last year. The supers had been left on two hives after the combs had been put back to clean after extracting the previous year, the quilts had simply been dropped on in a lump, the result was that in the following spring before the "bee-keeper" was aware what was happening the whole thing, roof and supers—and one of these had not the full number of combs in—were one mass of bees, comb, and honey. He asked me to tell him what to do, and I had an hour or two digging the things out.

Some bee-keepers have very hazy notions of how to use disinfectants, and occasionally get mixed between Naphthaline and Naphthol Beta. In one apiary I found that the hives had been plentifully supplied with the latter instead of Naphthaline, and the owner was a doctor! Numbers of times I have seen brood asphyxiated by using too much disinfectant. Foul brood was just commencing in a couple of hives one spring. I told the owner that possibly a stiff dose of Naphthaline might check it, and advised four balls instead of the usual two. On going again in the autumn there was a handful in each hive, he had bought a pound, and divided it between the two stocks—he secured no surplus honey that year. A friend once persuaded an old lady to put some Naphthaline in her hives, and a week or two afterwards offered her some more to renew it, but she "didn't want no more o' that stuff, t'other lot wor no good, and did nowt only waste away."

It is a rule among bees that only one laying queen is allowed in a hive, but there are exceptions. On examining a hive in an Essex apiary two queens, an old and a young one, were found one on each side of a comb, the old queen was evidently being superseded but for some reason had not been turned out, although her successor had mated and was laying. Again, what precautions are taken when bees are united to prevent fighting and to preserve the best queen, even then she often comes to grief. A year or two ago Mr. R. Parker, at Milnthorpe, had two small lots of bees, one of them headed by a worn-out drone breeding queen, and the other by a young one. Of course, the correct thing was to unite the two, and before doing so to take away the old queen; but farmers are always busy, especially at haytime, and

as these were not the only colonies in the apiary by a score, and it was a matter of indifference whether they came to grief or not, they were simply floured and put together and left to make their own arrangements. Nearly a week afterwards I called, and we examined this stock to see what had happened. Mr. Parker found a queen on the comb he was examining, and an exclamation told me it was the old one. I replaced the comb I held and picked up the next, and there was the other queen. My brother and I once had two queens laying for several days in a five frame hive with glass sides.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

SHADE FOR THE BEES.

[9152]—I am wondering if you would think the following idea useful enough to publish. It is, at any rate, seasonable just now, and might, in very exposed positions, be useful and appreciated. A most effective shade can be made at little cost by weaving straw into mats, 2½ or 3ft. wide, which can be made for hives in pairs, rows, or to suit the fancy of the apiarist. The mats can be suspended by four or more stumps and two strands of wire about half-way over the front of, and about one foot above, hives at any desired angle, and would inconvenience neither bees nor manipulator. Method of making is quite simple: Five stakes about 3ft. long are driven into ground at equal distances, the distance between the two outside being the same as the width of the mat it is desired to make. Parallel with these and the same distance apart as the two outside stakes are erected two more stakes, a rail being nailed from one to the other at the top. The distance of these from the other stakes should be a little further than the length of the mat. Pieces of strong twine are now tied from the top of each of the five stakes to the cross rail at the other end, keeping them parallel with each other. Four more lengths of twine about 4ft. longer have now one end tied to the rail, exactly half-way between the twine already fixed, the other end being tied to a loose piece of wood, such as a broom-handle, and so that when held taut they also are parallel. Now a neat and even wisp or band of straw about 2in. in diameter and long enough to reach right across the twines is taken, the loose handle is lifted up, keeping the twine fairly tight, and the straw laid on *top* of the fixed twines and *under* the others. Another straw band is now taken, the loose handle is dropped, and this wisp is placed *under* the fixed twine and over the others, this process being repeated until the mat is finished. When the twine is tied to the fixed rail it should be done so that it can be untied and need not be cut, and enough should be left to allow for tying and finishing off. The edges of the mat can be trimmed off with the garden shears. If one is blessed with an orchard in which to hang it, a good hammock may be made in this way by strengthening the mat with cord underneath. On a smaller scale very decent wintering quilts may be made if the edges are hemmed.

Since my letter, "Vagaries of Swarms," I have had eight swarms. I found in the doubtful case the old queen had left again, as there were the queen cells still left, so a frame of brood seems to have the effect of driving out, as well as keeping at home. I had my first take of about twenty-two pounds, sections, and extracted honey last week-end.—A. H. Hamshar.

SWARMING TROUBLES.

[9153]—Having commenced bee-keeping this season in a district wholly denuded of bees by the "Isle of Wight" disease, it has struck me as curious that stocks which have inhabited old walnut trees from time immemorial should have been unaffected by its ravages in spite of being within two hundred yards of an apiary which has been quite annihilated. I wonder if you have had many instances of this happening in other districts?

I have been very much worried by the swarming propensities of my bees this season. Depriving them of queen cells, enlargement of brood chamber, supering, and all other devices seemed ineffectual; nothing short of taking away the queen seems to have been any good, and this is often hard for a novice, who finds difficulty in spotting the queen on crowded

combs or whilst struggling to persuade a swarm to enter a hive.

I find a simpler plan, and one which seems least disturbing to the bees, is to hive the swarm in a skep after fixing a piece of perforated zinc over the hole in the top. It is simple then to fasten a piece of queen excluder over the bottom as soon as the bees are well in, blow a few puffs of smoke through the hole in the top, and out they will all come and in a few minutes return to the parent hive, leaving the queen behind them.

I saw a note in an American magazine the other day recommending that early in the season the wings of the queen should be clipped, but it seems to me that she would probably get lost endeavouring to get out with the swarm.

Have hives ever been introduced having the brood chamber *above* queen excluder, and arranged to take sections or shallow frames beneath, or anyhow so arranged that the queen could not get out? I suppose there is some objection to this method.—JAMES W. FITZWILLIAM.

[The plan of confining the queen would not answer at all. To mention just one thing, what would prevent the queen from escaping would also confine the drones with probably disastrous results.—EDS.]

PRESS CUTTINGS.

COLLECTING ROCK HONEY.

A writer in *New India* mentions that amongst the various items of minor forest products collected in the Satyamangalam Hills, Madras Presidency, by no means the least important are honey and wax. Rock honey is produced by very large bees, and found in holes and under ledges of rocks. This honey is coarse and dark, and the wax very dark-coloured. The first season's products are collected in August, when the rocks are dry, and the products of the second season as soon as the hot dry weather sets in, and there is less chance of slipping. It is very dangerous work, involving risk to life. In the Satyamangalam Hills the collection is done only by Kurumbars. A party of fourteen to fifteen starts on the expedition in the proper season. Of these, only two (Kurumbars) are collectors; the rest are employed to carry goods and chattels, erect sheds, light fires, and to do odd jobs for the two collecting Kurumbars. The two Kurumbars, who alone climb up the rocks and collect the honey, are invariably brothers-in-law—that is to say, each man's wife is the sister of the other man—and each is responsible for the life and safety of the other. For instance, if the rope were not held firmly, or were allowed to slip, the man on the ladder would be dashed to pieces against the rock, and his wife would become a widow, to the lasting shame of her brother, who was the cause of the catastrophe. The expedition always starts on a Monday, which these hill-tribes regard as a very auspicious day. When starting off, the party take with them cocoanuts, plantains, camphor, and other offerings to their family deity; also their implements of collection, which consist of a long ladder made of *koracha* fibre, with a stout rope of the same material attached to it; a bowl made of basket-work smeared over with clay, with a long handle, in shape much resembling a soup-ladle; a sharp-pointed stick; and a bundle of torches composed of green and dry grass mixed. The rope attached to the ladder is fastened firmly to a tree, and the ladder is thrown off the top of the rock. One of the Kurumbars holds on to it while the other climbs down the ladder until he finds himself on a level with the honey-combs which are on the slippery sides of the rocks. Arrived there, he plants his right foot firmly on one rung of the ladder and leans his left knee on the rung above. Being firmly fixed, he swings himself backward and forward, having in one hand a burning torch and in the other the pointed stick; and as he swings in towards the rock he applies the torch to the combs, and drives away the bees and collects the comb. At the end of each day's work the Kurumbar climbs up to the top of the rock. The operations go on for several days. On the last day, when all the honey and wax has been collected, the rope is untied and the ladder dropped down to the bottom.—From *Chambers' Journal*.

BLACKS *vs.* ITALIANS.

A few years ago I wrote something about the difference in the honey-gathering, hardiness, and other qualities of the common brown or black bees as compared with the Italians. I notice that Mr. Doolittle says that, as to gathering nectar from bass-wood and clover, he has never been able to see any difference between the two races.

Now, this is a subject to which I have given a great deal of attention without making a very definite conclusion. I still have both races, and so far I cannot rate the ordinary Italians much ahead, as a great many bee-keepers do.

A short time ago Dr. Miller said he thought that not many bee-keepers of the present time ever saw a case of "roping" or hanging down from the comb in a rope-like cluster. I have had the blacks do this time after time, and sometimes it is a great advantage, as the bees are very easily shaken from the comb. This is usually very difficult with the Italians.

When I began keeping bees I secured a very gentle strain of Italians which were highly recommended as honey-gatherers. After I increased them to about half a dozen colonies, I thought I was sure of a fair crop of honey; but imagine my surprise when they began to swarm about the first of May, and kept it up until the season for storing honey had passed. Of course I had not had enough experience then to know how to manage them to the best advantage, or I might have secured some honey, anyhow. Since then I have learned how to manage them better; but I still feel that I do not know all there is to be learned, since I sometimes meet with surprises.

For the past five years I have had two apiaries about three miles apart—the one at home of Italians, the other of the common black variety, and so I have had a fair chance of comparing the two races. With Mr. Doolittle I find no practical difference in the honey-gathering of the two; but in other respects I find considerable difference between them. The blacks do not rear brood quite as early as the Italians, which is an advantage here, as the nectar flow is usually rather late. The blacks swarm later, and generally not until they have filled one super with honey, while the Italians will often swarm before they have worked in the supers at all. The blacks seem to economise their stores better in wintering, as I often have to feed the Italians, when the blacks, with exactly the same management, will winter without any feeding at all. As to the gentleness of the two it is a rather open question. Often I find colonies of almost pure Italians that are as cross as any bees could be. Smoking the blacks soon stops them from stinging, while I have found some Italians that were very hard to control with smoke. For colour I prefer the Italians. Taking everything into consideration I find that the Italians are often over-rated. I can get just as much money from the blacks as from the Italians.—W. C. Mollett, Stonecoal, W. V., from *Gleanings in Bee Culture*.

CUTTING FROM PUNCH.

"Bees for Sale; strong, healthy stock; only one left.—Apply, 'Gardener.'"—*Llandudno Advertiser.*

In the circumstances the use of the plural seems hardly justified.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of May was £3,392. From a return furnished to The British Bee Journal by the Statistical Office, H.M. Customs.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

EXPOSED NYMPHS.

[9010]—Can you please tell me the reason for the cells in the piece of comb sent herewith not being properly sealed, and is there disease? Nearly all the cells in the four combs in the hive containing brood are the same, and I noticed the same thing in the same stock a couple of weeks ago. The bees seem quite all right. I have taken every copy of the Bee Journal for the past twenty-two years, and I think this is my first question. I have very much appreciated your articles in the Bee Journal.—Twenty Years' Subscriber.

Reply.—The larvæ in comb sent are not diseased. This condition may be caused by (*a*) wax moth: these eat away the cappings over the brood; (*b*) too strong or unsuitable disinfectant in the hive, and this is most probably the cause. If you are using Napthaline in the hive you have either put in an overdose, or it is too crude.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

J. Y. (Cambs.).—*Identification of Flower.*—It is commonly known as the Snowberry. The botanical name is *Symphoricarpus racemosus.*

Amateur (Wisbech).—(1) It is better to put all on at once, and you may place a comb of honey in as you suggest. (2) You forget that it takes from 17lbs. to 21lbs. of honey to produce 1lb. of wax. (3) Mr. J. A. Bramley, Council School, Holt, Norfolk.

H. H. Dennis (Notts.).—(1 and 2) The queen has not mated. (3) No; they have not the room.

L. S. K. (Lancs.).—The queen was a virgin. The drone had mated with a queen.

Sirius (Leeds).—They are not likely to swarm if you do not allow them to become overcrowded; give extra room a little in advance of their requirements. It is better to join an Association. The secretary of the Yorkshire B.K.A. is Mr. W. E. Richardson, 14, Carter Mount, Whitkirk, Leeds.

J. Brander (Bristol).—(1) Yes, if the brood box is full of bees and comb. (2) No. (3) Quite possible.

Suspected Disease.

"Amateur." (Suffolk), "Milcum" (Cumb.), A. G. C. (Bletchley).—The bees are suffering from "Isle of Wight" disease.

"Perplexed" (Bridge of Allan).—It is "Isle of Wight" disease. No one colony will show *all* the symptoms.

F. C. Hayward (Birmingham).—The bees were too dry for diagnosis. Your theory is probably correct.

"Doubtful" (Syde).—There is no doubt now. It is "Isle of Wight" disease.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

June 29th to July 3rd, at Nottingham.—Royal Agricultural Society's Show, Bee and Honey Section, under the direction of the B.B.K.A. Prizes arranged in groups of counties for Associations affiliated to the B.B.K.A. Schedules from The Secretaries, 25, Bedford Street, Strand, W.C. **Entries closed.**

Tuesday, August 3rd, 1915.—Bridgnorth and District Bee-keepers' Association, held in connection with the Hampton Loade Horticultural Society. Schedules on application to J. S. Lawton, 77a, High-street, Bridgnorth. Honey to be addressed to J. S. Lawton, Hampton Loade Station, G.W.R.—**Entries close July 26th, 1915.**

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ..	£26	15	6
An Exhibitor		4	6
	£27	0	0

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1d. *per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS.

FIVE strong, healthy stocks of bees, each on 10 frames, 30s. each; several May and June swarms, on 6 and 8 frames, full of brood and stores, at 3s. 6d. per frame, f.o.r.; boxes returnable carriage paid, or 4s. 6d. each extra; cash with order or deposit.—J., 9, Sunnyside-road, Ilford, Essex.

LARGE quantity W.B.C. hives, good condition, 5s. 6d. each; treadle saw mill, 40s.; gross screw top lb. jars, drawn out shallow frames, 2s. 3d. dozen; eight each shallow and section racks, 9d. each; selling through bereavement.—MRS. OWEN, Risby, Bury St. Edmunds. v 22

WILL give services to look after apiary, if owner wants to go to the front; have been keeping about twenty experimental hives for ten years, but have lost them through "I.O.W." disease; age 54. BELLERS, Bacton, Ottery St. Mary. v 26

FOR SALE, two W.B.C. hives, in good order, 12s. each. ARTHUR, 226, West George-street, Glasgow. v 25

5-FRAME nuclei pure Italians, lots of brood, 15s., healthy; boxes to be returned.—J. HAGUE, Kirkham, Lancashire. v 24

THREE nice second swarms, hived on five frames, full sheets foundation, wired, 10s. 6d. each; guaranteed healthy; boxes to be sent.—KNIGHT, Kenwyn, Truro. v 17

FOR SALE, six W.B.C. hives, 7s. 6d. each; large ripener, 9s.; three crates of 28lb. tins; 3s. crate of four; all new last season.—TRERISE, Dungeness, Kent. v 23

FOR SALE, swarms, 12s. 6d., carriage and box free; stocks, boxes and skeps, 16s., carriage forward; good stocks on six frames, 25s.; also sections and extracted honey.—NORRIS, Barracks, Cashel, Ireland. v 21

GOOD stocks of bees for sale, six, eight, or ten frames; particulars, stamp.—WILSON, Apiary, Belper. v 20

TWO dozen well filled sections honey for sale, in good condition, cheap to clear; offers.—T. DAMPIER, Luppitt, Honiton, Devon. v 19

PURE English clover honey, granulated, 58s. cwt.; sample, 2d.—BUTTON, Haverhill, Suffolk. v 18

HEALTHY natural swarms for sale, 7s. 6d.—Apply, QUEENIE McENERY, Rossenarra House, Kilmogany, Kilkenny, Ireland. v 16

HIVES.—Five 12-frame, four 10-frame standard hives, reasonable offer accepted to clear.—L. M. S., Bridgeyate House, Warmley, Bristol. v 15

VIRGINS; few Dutch and Dutch hybrids, 2s. 6d.; mated, 5s. 6d.—PAUL, Salisbury-road, Bexley. v 14

WANTED, ripener, wax extractor, small sizes, and W.B.C. uncapping knives.—HAVARD, The Lion, Senny Bridge, Breconshire. v 13

FOR SALE, owing to removal, stocks, 4-frame nuclei, hives, quantity 28lb. and 14lb. tins, excluders, racks, sundries.—J. BOWDEN, Broomhill, Witley, Surrey. v 13

HONEY, good quality, in 1lb. screw top bottles, 8s. dozen; also sections, 8s. 6d. dozen.—COWELL, Sheringham, Norfolk. v 2

FOR SALE, motor bicycle, Ormonde, £6; tricar, Humber, £20; or exchange for bees.—WHITEHEAD, Eccleshill, Bradford. v 93

SALE, honey, excellent quality, granulated, last autumn's, in 28lb. tins; sample, 3d.—COLE, Roxholme, Sleaford. v 86

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

HAVING obtained larger one, will sell Green's 10in. lawn mower, 8 knives, and grass box, 25s., or offers, in excellent condition.—HERRODHEMPSALL, Apiary, Luton, Beds.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, cloth bound copy "Bee-Keepers' Record," Vol. 7, year 1889.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

THE JERSEY BEES HAVE ARRIVED.

ONLY a few stocks left for disposal; early application should be made to prevent disappointment.—Particulars, MANAGER, BRITISH BEE JOURNAL.

MOVING apiary, to clear.—About gross extracted shallow frames, 5s. dozen; racks, 1s. each; twenty empty section racks, 1s. 3d. each; a few fitted with foundation, 3s. 6d. each.—E. F. J., "Bee Journal" Office, 23, Bedford-street, W.C.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

WILKES' free-way excluder and non-swarming method have resulted in enormous takes of honey; sample excluder, 2s.; illustrated work explaining prevention of swarming, with many photos, 1s. 1d.; send for 1915 catalogue, all post free.—WILKES, Four Oaks, Birmingham.

CHOICE PROLIFIC ENGLISH QUEENS, 1915, selected and tested, bred from non-swarming stocks, 5s. 6d. each; safe arrival guaranteed; 12th year.—ARTHUR H. WILKES, Four Oaks.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

PURE bred heavy-laying pullets, noted strains: Orpingtons, White Wyandottes, R.I.R., Leghorns, Light, Speckled Sussex; guaranteed healthy, true to type, reasonable prices; eggs for hatching; day old chicks; write for particulars; also swarms and stocks of bees.—DOLLIS PARK POULTRY FARM, Church End, Finchley, London, N.

SECTION Glazing, lace paper strips, 7d. per 100; lace bands, 3in., 1s. 3d. per 100, post free; good section racks, slotted dividers, followen and wedge, complete, 1s. 6d., as new; also section racks, complete, 1s. 3d. each.—W. WOODLEY, Beedon, Newbury.

OFFERS, with price, invited for this season's honey, sections and extracted.—DAVID HANCOX, Deddington, Oxon. v 4

BRICE'S BRONZE MEDAL QUEENS (23rd season), special 7s. 6d., selected 5s. 6d., guaranteed.—BRICE'S APIARIES, Green-street Green, Orpington, Kent.

ATKINSON'S 1915 list, unequalled choice of the best British and foreign bees and queens; all particulars, stamp.—BEE FARM, Fakenham. v 6

"ISLE OF WIGHT" and Foul Brood.—Write for free descriptive booklet of our special remedies; also formaldehyde and tablets, naphthalene, disinfectants, &c., &c.—W. FIELDING, bacteriologist, 5, Bishop's-avenue, Upton Park, London, E. v 11

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d. post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 41

KOOTENAY BEE-KEEPERS' ASSOCIATION.

Those of our readers who knew Mr. W. J. Sheppard when he was secretary of the Essex B.K.A. will remember his enthusiasm for bee-keeping, and the good work he did for the Association. If every one at Chingford, where he resided, and the district round was not a bee-keeper it was through no lack of energy on his part. He appears to be putting the same vim into the work in far-away British Columbia, since he has been the secretary-treasurer of the Kootenay B.K.A., as the copy of a "Notice to Members" printed below shows. The honey label enclosed is one of, if not the best we have seen; we are only sorry we cannot reproduce it, as it is printed in colours. The centre of the design is taken up by a splendid little view of Crow's Nest Mountain, The Gateway of Kootenay.

We hope our readers will pay especial attention to the advice given in the latter part of the paragraph on foul brood.

NOTICES TO MEMBERS.

Honey Labels.

Association Honey Labels, for the use of Members only, as per sample enclosed, can be obtained from the Hon. Secretary-Treasurer, Nelson, at the following prices, post free:—100 60c., 250 $1.35c., 500 $2.60c., 1,000 $5.20c.

"EAT B.C. HONEY" Labels supplied at 15c. per 100, post free. Boiling-water mixed with household starch, with a little honey added, makes a good paste for the Labels.

Glass Honey Jars and Cans.

Glass Honey Jars, holding 16oz. net, price $6.85c. per gross (weight about 145lbs.), and lever lid cans, holding 5lbs. net, price 7c. each, f.o.b. Nelson, supplied to Members by the A. Macdonald Company, Nelson.

Brood Foundation.

Dadant's light brood foundation, 9-10 sheet to the 1lb., can be obtained from the A. Macdonald Company, Nelson, at $3.15c. per 5lb. box, f.o.b. Nelson. Parcel postage 12c. if within the 20-mile radius of Nelson, beyond 30c.

Sugar for Feeding Bees.

The A. Macdonald Company, Nelson, will supply Members of the Association with white granulated sugar for feeding bees at wholesale prices, which are at present $7.85c. per 100 sack, and $8.00c. per bale of five 20lbs. sacks, f.o.b. Nelson.

Foul Brood.

On account of the danger of introducing Foul Brood, which has made its appearance in some parts of the Province, it is advisable when buying bees or queens to purchase them in one's own immediate locality, if possible. The Kootenays at present are free from the disease. Vessels that have contained bought honey should never be thrown out or left about where bees can gain access to them. Honey from diseased colonies contains Foul Brood spores which can thus be unwittingly conveyed to healthy ones.

W. J. SHEPPARD,
Hon. Secretary-Treasurer,
Kootenay Bee-keepers' Association,
Nelson, B.C.
June 5th, 1915.

Total Membership now 73.

CARNIOLAN CHARACTERISTICS.

In a five-mile radius swept almost entirely clear of bees last year I found, besides two yellow lots that have got strong and well, one village of rather remarkable blacks. They have been doing a good deal less than well for three or four years past, and this year have wakened to swarming strength. When I found them early in May there was a faint, though possibly ambiguous air of "Isle of Wight" about them, and I cannot help thinking that the bad years they have gone through have been spent in fighting that disease. One other stock here (Italian hybrid) certainly infected with "Isle of Wight" has apparently thrown it off during the hot weather, and these have lost the air of having it. I don't know how they got there, but their colouring is strongly of the Carniolan type. If I describe what seems to be their character, perhaps someone who knows the Carniolan will verify or otherwise.

Four stocks were supered in good time, and three went up and did work on the sections, one taking the queen with it. But as soon as we lifted a corner of the quilt and peeped at the half-finished combs, down went the bees and would have no more to do with them. Putting an empty crate beneath a nearly full one had the same effect. They stored for a few days in the body box and swarmed—moreover, they casted.

I had some swarms, and this is how some of them went on. When I tried to get one out of a skep into a carry-box, it swarmed

back home. It came out two days later and was safely got into the carry-box, but being left there too long made the combs so soft that they broke down coming home. When I tried to put them in a hive they swarmed again. Skepped and hived, they stayed one night, but the middle of the next day swarmed again. Once more they were hived (in a different hive) and stayed, but it was more than a week before the queen was laying. Another lot carried home and lifted into a hive stayed one whole day, swarmed out, was comfortably skepped, but came out a few hours later and flew right away. Another lot went into sections, but being peeped at preferred to choke up the brood box. From what I have seen of Carniolans (possibly not pure ones) they want to be well supered once for all, and left severely alone. As these are swarming abundantly and the swarms are flying far, it seems as though the country will be re-stocked with this variety. May it prove luckier than the dead race it replaces.—G. G. DESMOND, Sheepscombe, Stroud, Glos.

BLURTS FROM A SCRATCHY PEN.

It was Sunday morning when I landed at St. Heliers, and Sunday trains here are the same as elsewhere, conspicuous by their paucity. My destination lay some six miles inland, so there was no alternative between taking a "voiture" or waiting until after mid-day. The latter alternative was promptly and immediately rejected, for the very sufficient reason I wanted my breakfast. There are but few taxis in Jersey, a not unmitigated evil, for the horse-carriage enabled me to get a less hurried view of the island. What were the things that I noticed most? Well, just fresh from a trip further north than London, I was at once surprised by the fertility of the land, the advanced state of the crops as compared with what I had just left, and as a bee-keeper I also noticed its wonderful possibilities. When on the previous day I had seen a field planted with potatoes, they were just peeping through. Here they were being dug up. The meadows were knee-deep with herbage, just that mixture of all kinds of wild flowerets a bee-keeper loves so much to see. He knows that amid that rich luxuriance there are a thousand and one nectar-bearing plants. The kine, too, were not allowed to roam at their own sweet will wherever they listed over the meadow, but tethered by the horns. Their rope gave them a circle of some twelve yards in diameter wherein to graze. When the owner considered that the space within the reach had been sufficiently cropped, a move is made and rapidly fertilized by the droppings of the cattle; the previous circle assumes its crop, and the cattle are all that mild, large-eyed, fawn-coloured race we are all so familiar with.

Green and gold are the hedges, built up of two shades of laurels, the one a bright yellow, the other as equally opposite in a dark green. The cottage gardens are gay with flowers, Jersey lilies, such as we grow under glass here, grow in the open; the laburnum, the pink hawthorn—all lend varied colour and tint. The oak, the elm, the chestnut, the sycamore are putting forth their new leaf. Thick and numerous they are almost as a wood; and underneath their lowest branches, 'twixt them and the top of the well trimmed hedges, we get a view of the grass ripening ready for the scythe, the playful wind rippling it almost as the sea we have just left.

Grouville lies about six miles from St. Heliers, more or less. It is an old French-English village, as you may gather from the names. The local spring is called "La Fontaine." The names of the shopkeepers have a Gallic derivation, and it is situated—ah, well, I am going to have a talk about that in my next.

Am I never to get away from Sunday swarming of bees? Even when I travel in other climes, am I always to be troubled and haunted by them at the period of the vernal equinox, and from that time even until midsummer day? My hosts were hospitable. I had refreshed and fortified, and felt now as if I merited some repose, for as you know I had been travelling the night through. But no, my tormetors were determined in their frightfulness. Scarcely had I essayed to rest than the farmer across the meadow sent word that there was a swarm ("un essaim") in an apple-tree in the orchard. Now the local farmers not knowing much of bees (for there are but few kept in the island) feared that they might sting his gentle-eyed cattle, who grazed tethered in the immediate neighbourhood. There was no alternative, that swarm had to be caught. It so happened that it was not in a difficult situation, and I thanked my fortune just a little too soon. Imagine the operation completed, the swarm "skepped" and underneath the tree. Afternoon tea is served, and I am considering how I shall hive it, when in comes the same farmer, "encore un autre essaim" again another swarm, and he is so fearful for his poor cows. I follow to the place where late I thought I had triumphed. The skep was empty, the bees had vanished. Of course I grasped the mystery of the second swarm. I felt much like anathematizing it. But what good would it have done? No; I felt that if it was a case of doggedness, I was going right through with it. Again I hived that swarm, and this time I won.—J. SMALLWOOD.

SPREADING BROOD.

By D. M. Macdonald, Banff.

In olden times this was a fashionable and fascinating occupation amongst bee-keepers during the month of June and early July. The earlier editions of our leading bee-books advised the practice and gave elaborate instructions as to the best processes for carrying out the transaction. Gradually it began to dawn on the minds of many that an operation in itself sinless led to evil and not good. One clear and definite success was followed by two, half a dozen, or a whole dozen failures; generally, indeed, the failures became the rule and the successes the exception. Succeeding editions advised more cautious, and even armchair apiarists gradually dropped the subject as unsavoury. In modern editions, if brood-spreading is even mentioned, it is to condemn it. Perhaps that is as it should be, because novices cannot make the operation a success. There are so many *ifs!*

And yet I consider there are times when it can be carried out to the advantage of the bees and bee-keeper, in spite of recent strong condemnatory pronouncements on this and the other side of the herring-pond. Thus Dr. Miller considers the practice should always be discouraged, and he says he knows of *no* time when he can do it to advantage. If I were certain of mild weather lasting two or three weeks I would do a good deal of it, but—well, weather is so changeable that it is a bit of a lottery, yet one in which I have often scored, but not in spring, when too many try it on to their own loss and the discouragement of the bees.

When I have young swarms in July I rather like to do a bit of brood spreading. Hiving them on, say, six frames, each fitted with a starter, in about five days after I place a new frame with a full sheet in the centre, and at intervals of two or three add additional frames until the full complement is given. The limited number of frames given at hiving time yields better work, better finish, better combs, and on account of the concentration of forces a quicker completion of the brood nest. Even if the weather is not consistently good there is no loss from chill, because a high temperature is maintained during the process of comb-building.

In the past, when feeding up driven bees, I have carried out a somewhat similar plan, and if I feared that brood was increasing too rapidly I simply transferred what I considered excess to some other hive where I deemed it would prove a benefit. I am far from being an advocate of general brood spreading, however, while its practice in spring I would utterly condemn—and yet the pity of it is that it is then, if it proves a success, that it tells most.

Handicaps.—Several of these will tell considerably on the success of our industry this season. Disease is still rampant. I could name a dozen Scotch counties where it has recently worked sad havoc. Purchasers of bees should invest very cautiously, and before paying should demand a certificate testifying that the bees are free of disease. The very great number of shows—cattle shows, flower shows, honey shows—where the fruits of our industry are generally exhibited, which will not be held this season must have a very prejudicial effect in withholding displays of honey and kindred produce. The poor visitors' lists in many health resorts and watering-places mean a considerable shrinkage in the quantity of honey sold. The heavy claims on our purses owing to war demands must make many a housewife erase luxuries from her list of purchases. The high price of actual necessities will curtail purchasing possibilities. Sportsmen who visited the North in such numbers will come in tens instead of hundreds.

Enthusiasm.—The comment on page 165 is a puzzle. Where did I record having been "fifty-four years among the bees," casually or otherwise? My note on page 109 was an extract, pure and simple, from Dr. Miller, on which I made no comment. I could point out a number of somewhat similar "misunderstandings" in this critic's recent contributions, where effect is at least *strained* for, mainly in reference to my own contributions. *Verb. sap.!*

Small Details.—In our industry one is often impressed with the value and importance of small details. Last year a novice left for some time a rack of sections standing up against the side of his one hive in a broiling hot sun. The consequence was the foundation got bent and twisted, and the result was an example of non-success in section building. Another told me his sections were all braced badly to the dividers. The reason was found in the fact that he let his sheets assume the slant of the V cut, and never thought of hanging them in a perpendicular position. I have seen dividers placed in racks bent and buckled, with the corners doubled and curved, thus inevitably producing defective sections. Other dividers

were inserted between rows of sections with the old brace combs, or at least the impression of them, to act as a temptation to the bees to repeat the folly of a former year. Old hands, alas! are no always free of guilt in neglecting small details.

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

QUEEN REARING AND INTRODUCTION.

(*Continued from p.* 207.)

Another method of doing this is seen at Fig. 17. The cell is cut with a large base, so that it will lodge between the top bars of the frames. In a weak stock it may get chilled by being high up away from the brood, therefore a better plan would be to pin it directly on to worker brood by means of a piece of wire bent in the form of a staple or a lady's hair-pin, Fig. 18, put astride the base which should be cut long enough to allow for this without crushing the cell.

When handling combs containing queen cells great care must be exercised to avoid jarring them, or the larva may be dislodged into the point of the cell away from

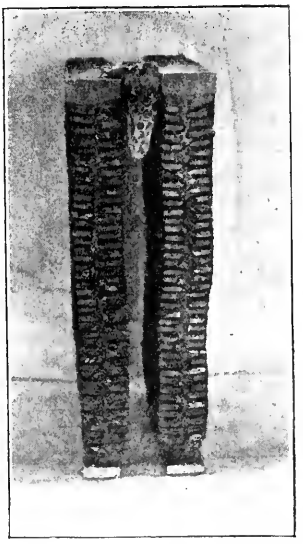


Fig. 17.

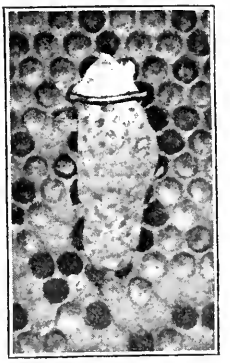


Fig. 18.

the food and so perish from starvation. The bees should not be removed by shaking the comb; turn it upside down over the uncovered frames of the stock and brush them off with abunch of grass, Fig. 19, or drive them down with smoke, Fig. 20.

Another method is to allow the selected stock to proceed with the preparation for swarming up to the point of sealed queen cells and then divide it into ten nuclei. Each comb must contain a queen cell; those not so provided should have one given by cutting the superfluous ones from the other combs, and inserting one into each of those which are without by the method already described. To complete

the nuclei it will be necessary to obtain two combs of food for each, twenty in all; these can be taken from other stocks, shaking them free from bees and replacing

FIG. 19.

with frames filled with foundation. Those at each side of the brood nest generally contain honey only or brood on but one side, which must be put facing the central

FIG. 20.

comb so that each of the ten nuclei contain three combs, one of brood and two of food, populated by bees from one stock. The queen should be preserved by introducing her to a stock having a failing queen.

(*To be continued.*)

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

RADNORSHIRE NOTES.

[9154] I am sending the returns of my honey crop for last year. This is a hilly district in North Radnorshire, and heather is within reach without moving the hives. I wintered four colonies. From No. 1 the take was 108lbs.; from No. 2 180lbs.; from No. 3, which swarmed in July, although the queen had ten standards and ten shallow frames, 32lbs.; and from No. 4, whose queen was killed in manipulating in May, 34lbs.; total, 354lbs. for four hives. No combs were given, as I have not an extractor. The bulk of the crop was clean, comb honey in shallow frames. The crop from No. 2 seems to be the record for this district.

For producting comb honey for home consumption some twenty shallow frames were divided in the centre by means of a lath fixed from the top to the bottom bar, with great success.

I can usually have several lots of bees the last week in September or the first week in October if I go and drive them. Last autumn I had seven lots and started three new hives. One lot was hived on ten shallow combs at about 3.30 p.m. They were slow in going in, but as the day was dull they seemed to settle down all right. Next morning, however, there was no doubt that they were queenless. They were flying and crawling everywhere, and were very bad tempered. I decided to unite at once with another lot which was two yards to the left. Now I find that flouring a stock ready for uniting is, at the end of September or at the beginning of October, a warm job; smoking is less troublesome, but any bees shaken down before the hive are slow in re-entering, therefore, I tried something else. A calico quilt was placed in an ordinary solution of Izal, well wrung out, and placed on top of the frames of the stock. Then five combs were taken out and the bees on them shaken down in front of the hive to run in again. The queenless lot were given a little smoke, and the five most crowded combs were moved to the other hive. What bees remained were shaken down before the second hive, and the first hive was dismantled. In about twenty minutes the bees had all settled down and recovered their good temper. The Izalised quilt was left on for about three hours. The bees were not stupefied by this treament, and as the day was bright they continued to fly all day, and though repeatedly inspected at close quarters by several persons, no one was stung. —F. W. Sibley.

SHIRLEY, SOUTHAMPTON, AS A BEE DISTRICT?

[9155] I should be much obliged if you or any of your readers could give me any information about Shirley, Southampton, as a bee district, including a candid statement with regard to the question of "Isle of Wight" disease in the neighbourhood, so as to enable one to judge if it would be advisable to attempt to keep bees there at present, or whether it would be better to wait a year or two.

I have unbound copies of the *B.B.J.* for the last ten years, which I shall be pleased to give to any reader willing to pay the carriage of same, on receipt of a postcard stating his or her name and address. —L. Illingworth, 17, Avenue Road, Brentwood, Essex. [One of our readers may perhaps be able to give Mr. Illingworth information.]

PRESS CUTTINGS.

The Value of Honey as Food.

It is surprising to-day how little the value of honey as a food and medicine seems to be recognised. Thousands of years ago our ancestors, whilst either following their agricultural pursuits or fighting, recognised the food value of this delicious sweet. In those days, hives were not thought of, and the honey bee made its home in a cleft of a rock or hollow tree, from which the honey was obtained. A land flowing with milk and honey—two of the most valuable forms of food which nature supplies ready for man's use—was the desideratum of the Israelites of old, and it is recorded in the Koran, written almost two thousand years ago, that a man went to the Prophet Mahomet for advice respecting his brother, who had violent pains in the stomach. The Prophet's advice was "give him honey;" the man departed, but shortly returned, saying "The medicine hath done the sick one no good." Mahomet said, "Go and give him more honey," the dose was repeated, and the man recovered.

The ancient Greeks, Romans, and Per-

sians used to embalm their dead with honey, which owes its antiseptic and preservative qualities to the presence of a minute quantity of formic acid. Preparations of formic acid are freely used in modern medicine for certain diseases, especially rheumatism.

Prior to the advent of sugar, honey was in all probability the only form of sweet known, and was looked upon as one of the necessaries of life in much the same way as sugar is now. Simply because honey is sweet, it must not be thought that it is the same as cane or beet sugar. Before cane or beet sugar can be digested, it has to be converted into grape sugar by the saliva and gastric juices, and it is in bringing this change about that the stomach becomes rapidly exhausted; consequently, a small quantity only can be dealt with. Large quantities taken rapidly into the stomach may set up acute indigestion or dyspepsia, or, in fact, prove actually poisonous. Now, quite the reverse happens when pure honey is eaten. All the work of conversion which entails so much labour on the human stomach is done by the bees, so it is at once obvious how much the system benefits by being able to readily assimilate such a perfect food without taxing in the least the digestive powers. The characteristics of good honey are a light, amber colour, bright and good consistency, with a subtle and pleasing flavour and aroma.

A Perfect Food.

Honey is a perfect food pre-digested with bland, healing, nerve-soothing, fattening properties, a purifier and enricher of the blood, and a gentle laxative, with valuable medicinal properties, which in ill-health is of the highest value. The value of honey as a food is higher than cod liver oil and malt, and in cases of consumption, anæmia, and wasting diseases it is replacing those preparations. An infant from the first day of birth given regularly small quantities of honey will thrive remarkably; bowel troubles, such as wind, constipation, and diarrhœa, will seldom or never be present. Honey also produces a beautiful complexion, if used as follows:—The face should first be washed with warm, soft water and a good soap, then dried, and smeared with honey for half an hour or so; the honey should be then well washed off in plenty of warm soft water, and the face carefully dried. There are very few complaints in which a medical man will not allow honey to be used. As a medicine, it is highly recommended for asthma, coughs, colds, and all affections of the chest and throat. One firm in this country uses in the manufacture of a certain cough mixture, on an average, forty tons per month. A cup of honey "tea," made by dissolving a tablespoonful (more or less to taste) of honey in a breakfast cup of boiling water should be sipped as hot as possible on rising, an hour before dinner, and on going to bed, and the good effects will be noticeable in a few days. In confectionery, it makes the most delicious cakes, which do not get dry —a point worth bearing in mind by those who are sending home-made confectionery to the Expeditionary Forces. From honey a delicious vinegar is made, which is unexcelled. From honey was made the famous mead and metheglin, the drink of Royalty and the warriors of old. Only a hundred years ago the position of mead-maker to the Royal household was an important and coveted one. Mead well made and matured a few years "in bottle" would tickle the palate of a connoisseur.—J. J.—From the *Staffordshire Advertiser*.

Cane or Beet Sugar?

As there is an idea of cultivating sugar in various suitable parts of England, will you allow me to quote the opinions of two doctors to one of the London morning papers on that important subject, warning us against the serious mistake of cultivating beet sugar, which very inferior imitation of sugar is what we have recently had from Germany, instead of the genuine cane sugar, which is of intrinsic value from a medical point of view as strengthening the muscles generally, and the muscles of the heart in particular? One of them, Dr. Goolston, writes as follows:—

> 1. In the treatment of diseases of the heart, beet sugar is not only useless, but absolutely injurious, and I have proved this many times when, either by accident or design, refined beet sugar has been substituted for refined sugar-cane sugar in the treatment.
>
> 2. Bear in mind that sugar is not merely a sweetening agent, but that it is a necessary food, not only for the heart, but also for the whole of the muscles of the body (43 per cent. of the body-weight), and that the adult heart requires its own weight (9 to 10 ounces) of sugar daily for its proper nourishment.

Now from statement 2 we see the very great need there is for a sufficient supply of sugar food for the proper nourishment of the body, and from statement 1 we see that sugar-cane sugar is the only form of sugar which is admissible. It is always worth while remembering that if it is desired to feed bees during the winter, the food must be made from sugar-cane sugar; if it is made from beet sugar the bees deteriorate and die.

Before closing this letter let me mention the following: — Up to the

middle of the nineteenth century all the world used sugar-cane sugar. Beet sugar was introduced into this country about this time, and since then the mortality from diseases of the heart has increased in a most alarming manner. Dr. Newsholme, C.B., medical officer to the Local Government Board, in his report for the year 1911-12, drew attention to the alarming increase in the mortality from diseases of the heart during the age period forty-five to fifty-five years. A still more alarming increase in the death-rates from diseases of the heart has occurred in Germany, a beet-sugar consuming country, to which Dr. Karl Grassmann called attention in the Munch. Med. Wochenschr., November 11th, 1913, which is quoted by the "British Medical Journal" in an article on the subject in its issue for February 7th, 1914.

Now it is a curious fact that this alarming increase in the deaths from diseases of the heart is coincident with the introduction of beet sugar into England, and my own belief is that this is a question of cause and effect, and that if we could reduce the consumption of beet sugar and increase the consumption of sugar-cane sugar we should, to a very great extent, reduce the number of deaths from diseases of the heart.

An article on the subject of cane and beet sugar in the *Nineteenth Century and After* for November, 1914, by Sir H. Blake, as advocating the claims of sugar-cane sugar, is most interesting. Another, Dr. Woods Smyth, writes:—"I am glad to see the letter of Dr. Goolston upon this important subject. Beet sugar, is a curse to the country. Not only as regards conditions and diseases of the heart, but also in gout, rheumatism, and all uric acid troubles beet sugar is injurious. A bee-keeper tells me that if cane and beet sugar are placed together, the bees refuse the beet and take the cane sugar.—ESCULAPIUS.—From the *Reading Observer*.

THE BEE AND THE PRIMROSE.

About the primrose, is it not remarkable that this delightful spring flower, this charmer in the lead of Flora's train, should have that about it—a poison in its cup or a noisome odour from its bloom—which frightens, offends, disgusts the goodliest and most industrious tenant of the woods and groves? The humble bee, the wild honey bee, visiting every other spring flower to partake of its sweets, shuns the primrose-bank as if it were the valley of the shadow of death—flies askant from the fair primrose as if it were a monster of ugliness or stank like Virgil's Albunea. To cause such behaviour on the part of the thrifty bee there must be that in its sensorium, when in presence of the primrose, that is far more potent, far more serious, than what caused the "doubts and fears" set forth in the song which our Carew sang so sweetly some 300 years ago:—

Ask me why I send you here
This firstling of the infant year;
Ask me why I send to you
This primrose all be-pearl'd with dew;
I straight will whisper in your ears,
The sweets of love are wash'd with tears.
Ask me why this flower doth show
So yellow, green, and sickly, too;
Ask me why the stalk is weak,
And bending, yet it doth not break;
I must tell you, these discover
What doubts and fears are in a lover.

—From the *Newcastle Daily Journal*.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

J. C. H. S. (Fyvie).—*Dead Queen on Alighting-board.*—The queen was an old one and had evidently been dead some time—a week or ten days. She had probably been injured during manipulations, as her thorax was damaged. When superseding her the bees would build several queen cells, and the first queen out would accompany the swarm. You may take it that there is a young queen in the old stock and also with the swarm.

"OBOE" (Torquay).—*Moving Bees to the Heather.*—The principal points to watch are to give plenty of ventilation and see that the hives are securely fastened up so that no bees can escape. The shallow frame boxes would answer all right, but a better plan would be to make a square frame of wood, ¾in. or 1in. thick and about 2in. wide; make the outside dimensions the same as outside of brood-box, "halve" the frame together at the corners, tack perforated zinc on one side, and screw down firmly on the top of the frames with the zinc uppermost. Also give some bottom ventilation if possible. The bees will be cooler if the roof is off. If your combs are wired and you give plenty of ventilation, there will be no risk. You may,

as a further precaution, tack a couple of strips of wood on the floorboard at each end of the frames, at right angles to them, and just thick enough to take their weight.

SIG. READER (Tyrone).—(1) It is much safer not to use it for the purpose at all. Boil for at least ten minutes. (2) They never would be clear under those circumstances. "Isle of Wight" disease spores have been found to be capable of infecting bees at the end of two years, and would probably retain their virility much longer than that. Foul brood spores have been known to live for twelve years. (3) Dutch bees are more or less mongrels, so a little further crossing would do no harm.

"TROUBLED" (Cheshire).—The bee sent is a drone.

A. A. E. T. (Chippenham).—(*a*) The water may be raised to 100 deg. Fahr. (*b*) Yes, you may do so; it is a matter for your own ingenuity. Could you not warm the honey in the extractor and strain into the ripener, or vice versa? (*c*) It will retard granulation and also facilitate straining. You do not need to keep the honey warm for any considerable time unless it is unripe or you wish to improve the density. You will not find anything better than in the books you name. We congratulate you on your success.

W. JEFFERY (Jersey).—(1) It is quite possible. Put a rack on and give them the opportunity. (2) If you do not wish for increase before swarming, put it on before the bees become overcrowded and commence to build queen cells. (3) You may either "drive" them this year or let them work down on to frames next year—April or May. If the skep is full of bees it may be possible to transfer by the latter method this year. You might try, and if you can get the combs in the frames built out and utilised by the queen for egg-laying, you will be successful. Feeding may be needed after the skep is taken away. (4) We take it you mean an association. The advantages vary: in some cases co-operation in buying appliances takes place; mutual exchanges; shows for prizes; monthly meetings; the visit of an expert, &c., &c. We do not know of an association near you.

F. C. W. (Cambs.).—(1) Not less than 1s. per jar or 70s. per cwt. (2) They are overcrowded and will probably swarm. (3) Re-queen at the close of the honey flow. Better make a nucleus now and rear a queen in it to be ready. Vicious bees are as a rule good workers. (4) Only when preparing to swarm, or when superseding the old queen. You may find the remains of old cells any time.

J. BRANDER (Bristol).—(1) Yes, if the brood box is full of bees and comb. (2) No. (3) Quite possible.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Tuesday, August 3rd, 1915.—Bridgnorth and District Bee-keepers' Association, held in connection with the Hampton Loade Horticultural Society. Schedules on application to J. S. Lawton, 77a, High-street, Bridgnorth. Honey to be addressed to J. S. Lawton, Hampton Loade Station, G.W.R.—**Entries close July 26th, 1915.**

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	27	0	0

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS.

FIVE strong, healthy stocks of bees, each on 10 frames, 30s. each; several May and June swarms, on 6 and 8 frames, full of brood and stores, at 3s. 6d. per frame, f.o.r.; boxes returnable carriage paid, or 4s. 6d. each extra; cash with order or deposit.—J., 9, Sunnyside-road, Ilford, Essex.

WILL give services to look after apiary, if owner wants to go to the front; have been keeping about twenty experimental hives for ten years, but have lost them through "I.O.W." disease; age 54.—BELLERS, Bacton, Ottery St. Mary. v 26

LARGE quantity W.B.C. hives, good condition, 6s. 6d. each; with legs, 7s. each; treadle saw mill, 40s.; selling through bereavement.—MRS. OWEN, Risby, Bury St. Edmunds.

LARGE table pigeons, wish to clear, 10s. to 12s. per pair.—STUART, Hope-street, St. Andrews v 36

HEALTHY natural Italian swarms, 15s.; seconds, 10s. 6d.—CADMAN, Codsall Wood, near Wolverhampton. v 35

TRICAR, Humber, water cooled, good running condition, £20; or exchange for bees and appliances.—WHITEHEAD, Eccleshill, Bradford. v 34

ITALIAN home-raised queens, fertile, 1915, from imported mothers, 5s. each.—OLIVER KNIGHT, Epney, Stonehouse, Glos. v 33

SURPLUS six 8-frame stocks, with vigorous disease resisting 1915 queens, 30s. each; apiary guaranteed free from disease.—E. WATSON, Holywell-hill, St. Albans. v 31

QUEENS.—A few 1915, 4s.; immediate despatch; cash with order; no disease.—W. J. OWERS, Barrington-road, Horsham. v 30

STRONG 10-frame stocks of English bees for sale; diseases never been known.—THOS. CORNEY, Ramsey St. Mary's, Huntingdon. v 29

FISHERMAN would exchange his outfit, comprising three rods, reels, lines, salmon and trout flies, spoons, wings, feathers, dressing box and contents, for good stock of bees, with hive; must be guaranteed free from disease.—COUPAR, Broughton, Cockermouth, Cumberland. v 28

FOR SALE, six W.B.C. hives, 7s. 6d. each; large ripener, 9s.; three crates of 28lb. tins; 3s. crate of four; all new last season.—TRERISE, Dungeness, Kent. v 23

FOR SALE, swarms, 12s. 6d., carriage and box free; stocks, boxes and skeps, 16s., carriage forward; good stocks on six frames, 25s.; also sections and extracted honey.—NORRIS, Barracks, Cashel, Ireland. v 21

PURE English clover honey, granulated, 58s. cwt.; sample, 2d.—BUTTON, Haverhill, Suffolk. v 18

HEALTHY natural swarms for sale, 7s. 6d.—Apply, QUEENIE McENERY, Rossenarra House, Kilmogany, Kilkenny, Ireland. v 16

FOR SALE, owing to removal, stocks, 4-frame nuclei, hives, quantity 28lb. and 14lb. tins, excluders, racks, sundries.—J. BOWDEN, Broomhill, Witley, Surrey. v 13

HONEY, good quality, in 1lb. screw top bottles, 8s. dozen; also sections, 8s. 6d. dozen.—COWELL, Sheringham, Norfolk. v 2

SALE, honey, excellent quality, granulated, last autumn's, in 28lb. tins; sample, 3d.—COLE, Roxholme, Sleaford. v 86

HAVING obtained larger one, will sell Green's 10in. lawn mower, 8 knives, and grass box, 25s., or offers, in excellent condition.—HERROD-HEMPSALL, Apiary, Luton, Beds.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, cloth bound copy "Bee-Keepers' Record," Vol. 7, year 1889.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

THE JERSEY BEES HAVE ARRIVED.

ONLY a few stocks left for disposal; early application should be made to prevent disappointment.—Particulars, MANAGER, BRITISH BEE JOURNAL.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

WILKES' free-way excluder and non-swarming method have resulted in enormous takes of honey; sample excluder, 2s.; illustrated work explaining prevention of swarming, with many photos, 1s. 1d.; send for 1915 catalogue, all post free.—WILKES, Four Oaks, Birmingham.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

CHOICE PROLIFIC ENGLISH QUEENS, 1915, selected and tested, bred from non-swarming stocks, 5s. 6d. each; safe arrival guaranteed; 12th year.—ARTHUR H. WILKES, Four Oaks.

PURE bred heavy-laying pullets, noted strains: Orpingtons, White Wyandottes, R.I.R., Leghorns, Light, Speckled Sussex; guaranteed healthy, true to type, reasonable prices; eggs for hatching; day old chicks; write for particulars; also swarms and stocks of bees.—DOLLIS PARK POULTRY FARM, Church End, Finchley, London, N.

NOW booking nuclei, ready third week July, 4-frames, 12s. 6d.; 6-frames, 16s. 6d.; full of brood, with selected young queen, White Star Italians by arrangement; choice 1915 queens ready for despatch, healthy; particulars, stamp.—CROWE, Stawell, Bridgwater. v 32

SECTION Glazing, lace paper strips, 7d. per 100; lace bands, 3in., 1s. 3d. per 100, post free; good section racks, slotted dividers, followen and wedge, complete, 1s. 6d., as new; also section racks, complete, 1s. 3d. each.—W. WOODLEY, Beedon, Newbury.

BRICE'S BRONZE MEDAL QUEENS (23rd season), special 7s. 6d., selected 5s. 6d., guaranteed.—BRICE'S APIARIES, Green-street Green, Orpington, Kent.

ATKINSON'S 1915 list, unequalled choice of the best British and foreign bees and queens; all particulars, stamp.—BEE FARM, Fakenham. v 6

"ISLE OF WIGHT" and Foul Brood.—Write for free descriptive booklet of our special remedies; also formaldehyde and tablets, naphthalene, disinfectants, &c., &c.—W. FIELDING, bacteriologist, 5, Bishop's-avenue, Upton Park, London, E. v 11

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d. post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 41

THE GELSTON CURE

For the Isle of Wight Bee Disease.

Highly recommended by M. T. Batten, who, in a letter to the *British Bee Journal*, November 12, 1914, stated: "I have had no further trouble since using the Gelston Cure." Mr. Davidson, Morpeth, writing on April 20, 1915, for another bottle, says: "It has kept mine free since November."

Price 1s. 3d. and 2s. 6d. per bottle, post free, with instructions.

GELSTON & CO., The Pharmacy, Basingstoke

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held in the office of the Hives and Honey Department in the Royal Show Ground, Nottingham, on July 1st, 1915. The Rev. F. S. F. Jannings presided, and there were also present Miss M. D. Sillar, Messrs. G. Bryden, J. Smallwood, Association representative, W. W. Falkner (Leicestershire), and the secretary, W. Herrod-Hempsall.

Letters expressing regret at inability to attend were read from Mr. T. W. Cowan, Mr. W. F. Reid, and Mr. C. L. M. Eales.

The minutes of Council meeting held on June 17th, 1915, were read and confirmed.

The following new members were elected. Mr. F. M. Hewens, Mr. H. L. T. Blake, Mr. J. Bell White, and Rev. M. Yate Allen.

The Northampton Association nominated Mr. F. Ward as their representative, and the same was accepted.

The Sheffield and District Association were duly accepted in affiliation.

The report on the paper work for the final examination was presented, and it was resolved to call upon the following to undergo the further test of lecturing:—Miss P. Wilks, Rev. F. S. F. Jannings, Messrs. A. Riley, H. E. Scrope Viner, W. F. Judge, W. Carr, J. S. Baldry, J. W. Heard, and J. Farquharson.

Next meeting of Council, September 16th, 1915, at 23, Bedford Street, Strand, London, W.C.

THE ROYAL SHOW AT NOTTINGHAM.

It would be difficult to find a more suitable ground for this show than Wollaton Park, in which stands Wollaton Hall, the seat of Lord Middleton. The surface is level, and there is no lack of space, and the scenery is delightful. As a whole the show may be counted a success, the attendance being very good. Bee-keepers are to be congratulated on the splendid display of honey on the stage. The trophy class was not so good as last year, only three displays being put up, two by Mr. R. Brown, of Somersham, one of which won first prize, Mr. J. Pearman, of Derby, taking the second prize. One other trophy was entered, but could not be staged, as the entrant was unable to procure bottles. The classes for wax, mead, vinegar, &c., were not so well filled as usual, but the samples shown were of very good quality. The Rev. F. S. F. Jannings, F.E.S., staged a group of waxes of various kinds, mineral, vegetable, and insect, including several samples of beeswax, and the tray from a Solar wax extractor containing wax just as it had dripped into it. This exhibit was a source of great interest to the numerous visitors and secured the first prize, the second in that class being taken by Mr. W. Dixon with a very tasty display of honey confections and medicines.

Mr. Watts exhibited his well-known Bee Escape and also his recently invented Hive Roof Escape, for which he was awarded first prize. Unfortunately, Mr. Watts will not be able to place the roof escape on the market at present as it is impossible to find a firm who can undertake their manufacture owing to the great amount of Government work in hand. This difficulty will vanish when the war is over, and bee-keepers will then be able to avail themselves of this very efficient device.

A splendid stock of hives and appliances were shown by Messrs. Jas. Lee and Son, Messrs. T. W. Harrison and Son, Mr. E. J. Burtt, and Mr. W. P. Meadows. No money prizes were given in these classes, but we hope these firms will have been rewarded for their loyalty in thus contributing to the success of the show by doing some good business.

We are sure our readers will be pleased to hear that Mr. J. Pearman, of Derby, has this year won the W.B.C. Gold Memorial medal. He has for many years been a regular and successful exhibitor at all the large shows, and a great number of the minor ones, but we venture to think no prize he has won will be so valued as this one. The second prize was again won by Mr. R. Brown, of Somersham. Our readers, especially those who have met Mr. Brown—"Dick Brown" as he is known to his friends—at the various shows and enjoyed his genial company, will be sorry to hear that he has been for the past month, and is still, very seriously ill, and was therefore unable to be at the show. This is, we believe, the first time for about thirty years that the "Royal" has been held and "Dick" Brown has not been present. He was greatly missed, and by none more than ourselves.

The Notts. Bee-keepers' Association held their annual competition in connection with the B.B.K.A., and made a most creditable

display. The "Herrod" Challenge Cup was again won by Mr. Jas. North. They also held a Honey Judging Competition during the show, the results of which will be published later. Our Senior and Junior Editors were appointed judges, but to the disappointment of all, Mr. Cowan was unable to attend, his place being ably filled by Mr. E. Walker, Mr. G. Hayes was steward, and the secretarial work of the show was undertaken by Miss M. Dagmar Sillar and Mr. J. Smallwood.

The following awards were made:—

HIVES AND APPLIANCES.

Class 534.—*Collection of Hives and Appliances, including Suitable Outfit for a Beginner in Bee-keeping.*—An Award of Merit was given to Messrs. W. P. Meadows, Syston, Leicester, E. J. Burtt, Stroud Road, Gloucester, T. W. Harrison and Son, 5 and 7, Cheapside, Nottingham, and Jas. Lee and Son, Uxbridge.

Class 535.—*Complete Frame Hives for General Use.*—Award of Merit to Messrs. W. P. Meadows and Jas. Lee and Son.

Class 536.—*Complete and Inexpensive Frame Hive for Cottager's Use.*—Award of Merit to Messrs. W. P. Meadows and Jas. Lee and Son.

Class 537.—*Honey Extractor.*—Award of Merit to W. P. Meadows.

HONEY.

Class 538.—*Observatory Hive, with Bees and Queen.*—1st, J. T. Willson.

Class 539.—*Any Appliance connected with Bee-keeping, to which no Prize has been Awarded at a Show of the Royal Agricultural Society of England.*—No award.

Classes 540 to 545 confined to Members of the Notts. Bee-keepers' Association.

Class 540.—*For the Best and Most Attractive Display of Honey of any year, approximating 56lbs. to include both comb and extracted honey in their various forms.*—No award.

Class 541.—*Six Sections of Comb Honey of any year.*—1st, G. Marshall; 2nd, H. Merryweather; 3rd, R. B. Hutchinson; r.n. and h.c., J. E. Allsopp.

Class 542.—*Six Jars of Light Extracted Honey of any year.*—1st, J. T. Willson; 2nd, James North; 3rd, William Lee; r.n. and h.c., H. Merryweather; h.c., C. E. Smith.

Class 543.—*Six Jars of Medium and Dark Extracted Honey of any year (excluding Heather Honey).*—1st, James North; 2nd, Charles E. Smith; 3rd, J. T. Wilson; r.n. and h.c., G. Houghton.

Class 544.—*Six Jars of Granulated Honey of any year.*—1st, James North; 2nd, Charles E. Smith; 3rd, W. Hopkinson; r.n. and h.c., A. G. Pugh; h.c., G. Marshall.

Class 545.—*Beeswax.*—1st, J. T. Wilson; 2nd, W. Darrington; 3rd, G. Marshall.

Entries in Classes 546 to 549 can only be made by residents in Cheshire, Cumberland, Derbyshire, Durham, Herefordshire, Lancashire, Leicestershire, Lincolnshire, Monmouthshire, Northumberland, Nottinghamshire, Rutland, Shropshire, Staffordshire, Warwickshire, Westmoreland, Worcestershire, Yorkshire, the Isle of Man, Ireland, Scotland, or Wales.

Class 546.—*Twelve Sections of Comb Honey of any year.*—1st, J. Pearman; 2nd, R. Robson; 3rd, Studley Horticultural College; r.n. and h.c., J. North.

Class 547.—*Twelve Jars of Extracted Light-Coloured Honey of any year.*—1st, T. A. Dennison; 2nd, Studley Horticultural College; 3rd, J. Berry.

Class 548.—*Twelve Jars of Extracted Medium or Dark-Coloured Honey of any year (excluding Heather Honey).*—1st, Studley Horticultural College; 2nd, T. A. Dennison; 3rd, J. Pearman.

Class 549.—*Twelve Jars of Granulated Honey of any year.*—1st, J. T. Willson; 2nd, Studley Horticultural College; 3rd, J. Pearman.

Entries in Classes 550 to 553 can only be made by residents in Bedfordshire, Berkshire, Bucks, Cambridgeshire, Cornwall, Devon, Dorset, Essex, Gloucestershire, Hampshire, Herts, Hunts, Isle of Wight, Kent, Middlesex, Norfolk, Northamptonshire, Oxfordshire, Somerset, Suffolk, Surrey, Sussex, or Wiltshire.

Class 550.—*Twelve Sections of Comb Honey of any year.*—1st, R. Brown and Son; 2nd, C. W. Dyer.

Class 551.—*Twelve Jars of Extracted Light-Coloured Honey of any year.*—1st, R. Brown and Son; 2nd, R. H. Baynes; 3rd, W. J. Goodrich.

Class 552.—*Twelve Jars of Extracted Medium or Dark-Coloured Honey of any year (excluding Heather Honey).*—1st, C. E. Billson; 2nd, R. Brown and Son; 3rd, G. Bryden.

Class 553.—*Twelve Jars of Granulated Honey of any year.*—1st, R. H. Baynes.

MISCELLANEOUS, OPEN CLASSES.

Class 554.—*Three Shallow Frames of Comb Honey for Extracting, gathered during* 1915.—1st, G. Bryden; 2nd, T. J. Willson; 3rd, F. G. Hales.

Class 555.—*Six Jars of Heather Honey of any year.*—1st, J. Pearman; 2nd, M. J. Lamboll; 3rd, G. Garbutt.

Class 556.—*Six Jars of Heather-Mixture Extracted Honey of any year.*—1st, J. Pearman; 2nd, J. Berry; 3rd, W. Dixon.

Class 557.—*Best and Most Attractive Display of Honey in any form, and of any year.*—1st, R. Brown and Son; 2nd, J. Pearman.

Class 558.—*Exhibit of Not Less than 2lbs. of Beeswax, the Produce of the Exhibitor's Apiary.*—1st, J. Pearman; 2nd, W. Garwell; 3rd, R. Brown and Son.

Class 559.—*Exhibit of Not Less than 3lbs. of Beeswax, the Produce of the Exhibitor's Apiary.*—1st, J. Pearman; 2nd, J. Berry; 3rd, J. T. Willson.

Class 560.—*Honey Vinegar.*—1st, R. Brown and Son; 2nd, Rev. F. S. F. Jannings.

Class 561.—*Mead.*—1st, J. Pearman; 2nd, J. T. Willson.

Class 562.—*Exhibit of a Practical or Interesting Nature Connected with Bee-Culture, not mentioned in the foregoing Classes, including Candy for Bee Feeding, Articles, of Food or Medicine in which Honey is an ingredient.*—1st, Rev. F. S. F. Jannings; 2nd, W. Dixon; certificate of merit, J. T. Willson.

Class 563.—*Exhibit of a Scientific Nature, not mentioned in the foregoing Classes.*—1st, F. W. Watts.

Weak Colonies (p. 163).—I fully agree with D.M.M. that it does not pay to fuss over weak colonies. The labour involved is not economically employed, and the hive capital is unproductive. I once wrote an article on what to do with such colonies, and experience confirms the whole of it. Briefly, they may be employed as bases for surplus brood, or for cleaning combs, or with advantage as nuclei for queen-mating, but it is not worth while to attempt to build them up into strong stocks at the expense of others. Of course, weak colonies ought not to exist, but if they do they should not usually be perpetuated, and should be made to earn their keep, instead of reaching strength too late for surplus. For a late harvest, re-queen as soon as possible, and watch them go ahead on their own. But don't fuss with them.

Sitting or Standing (p. 164).—I think that D.M.M. perhaps overlooks the fact that American hives are usually placed right upon the ground, whereas our own are raised upon stands or legs. This makes a tremendous difference to the ease with which a hive is manipulated, and may well account for a different attitude.

I feel sure that if I were to handle a large number of hives of the American type, I should sit to the work if possible. This would not be from "laziness," but from a desire to economise effort, and to accomplish more work in proportion to the same fatigue. As it is, with some thirty hives or so, conveniently raised, I do not find it essential, but I should hesitate to condemn another as "lazy," who thought otherwise. Labour is, indeed, one of the most serious, and recklessly spent, items of bee-keeping, and it is not generally regarded, by writers on this side, at its proper worth. On the other hand, I cannot say whether in America it is always fairly considered in relation to capital outlay upon, shall we say, hive stands.

Skeps versus Frame Hives (p. 165).—As a set-off to the case given on p. 112, I should like to give the figures of a skeppist whose bees I have recently seen. He started the season of 1914 with three skep hives. They each swarmed, one of them twice, making a summer total of seven stocks. He "took up" three of these, leaving four which he wintered, or a 33 per cent. increase of stock. He produced 14 stones of honey, which he sold at 9s. per stone. Ignoring increase of stock, the average result from the three original stocks was thus 65lbs. per stock, which for outlay, labour, and return, will compare favourably with a frame hive producing 70lbs. I may say that the whole of this crop was garnered in skeps, or caps, and buckets, &c., the bees having to build the new comb required without the aid of foundation. Now if the capital and labour involved are considered, that is not so bad for "the unprofitable skep."

Quinine for "Isle of Wight" Disease (p. 176).—I note that "sulphate of quinine" is here advised, but as this is not readily soluble in water, it is much better to use "bisulphate of quinine." This can usually be obtained already prepared by a chemist, and the trouble of dissolving with sulphuric acid, and possible inaccuracy, avoided. Get your chemist to make it up in the proportion of 1 to 15 of water, when each dram will contain 1 grain of quinine, and the right quantity can readily be administered. Thus, 2 ounces of the solution will contain 60 grains, and measurement may be by means of a bottle marked in ounces. Cut this out for reference, or write the proportions down and paste into a hive roof against the evil day.

The Ficus Sacra or Peepul Tree (p. 177).—This is, I think, the most remarkable photograph of bees that I have ever seen. In the portion of tree shown something over a dozen colonies appear, each on its bough, and apparently on single combs. Judging from the impunity with which they are robbed, the bees can hardly be the same variety as Mr. Kipling's "Little People"; but however that may be, the tree itself is well named, and well peopled.

though its scientific name should surely be *Populus Sacra*, since most living things would be eager to respect it. What would these "little people" do should the tree die? Would they bough to the inevitable, and seek "fresh woods and pastures new"?

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Excluders.—A reader of the *Australasian Bee-keeper* queries, "Do you use queen excluders, and if not, why not?" To this the Editor replies, "I use the queen excluders upon the hives that are finishing the queen cells only. I always fancy they retard the progress of the bees, also the circulation of air. Comb honey producers mostly use them." In my opinion the two first sentences quoted ring true, but I would demur to the last. Here it is quite the contrary. Few working for extracted honey would dispense with them. We who work for comb honey never—or almost never—use them.

Hybrids.—The same querist states that his hybrids were the only ones that had a surplus, and gently jabs the Editor by querying, "How does that suit you, queen breeders?" In his answer he admits that the "hybrids are the very best honey gatherers." His chief objection to crosses is the old one that too often they are *cross*, but he truly states that this is very frequently due to ungentle handling, jerky movements, jarring or quick actions, handling out of season, and giving an overdose of smoke. Finally, he advises a few puffs of smoke at the entrance, a few puffs over the tops of frames. Give them time to fill up with honey, and spray some sweetened water over them. All these are certainly aids to successful manipulations when undertaken under adverse circumstances.

Bee-keepers' Review.—Although most of the contents are written for the "big" bee-keepers, some of the smaller may get many useful hints. Let me glean a few of these: "The only colonies it pays to keep are the *rousing colonies*. If you cannot keep your colonies full of bees, you may as well go out of the apicultural work." "We spread brood as rapidly as we dared, all in vain. Colonies that were not stimulated did fully as well as those with which we took most pains. Bees seem to know when it is best to breed up in spring." "One of the handiest devices that we have made to expedite painting hives and fixtures is a turn-table, or stand that revolves." He piles up his hives six or more high and then paints downwards, and has not to move about, nor has he to shift paint, pails, or tools." The idea is a very good one. "A constant temperature of 110 deg. F., continued for from seven to ten days, will liquefy comb honey without injury to the comb." Some one might try it and report. "The bee-keeper must advertise, and sell, honey in his own locality, and under his own name. He must somehow get the people in his own locality to eat honey. Display cards aid greatly." This is a doctrine that should be preached again and again and again. "Each bee-keeper must spend his money himself, for himself, and develop his own home market to its full capacity. This is the key to the whole situation."

"Wide Awake" Bee-keepers.—Success is, at least at times, to the swift and the battle to the strong. The advanced, wide-awake, up-to-date, and observant score, as against the sleepy, jog-trot, go-as-you-please bee-keepers. So reasons Mr. Morley Pettit, Canada's chief apiarist. He successfully enlisted 541 bee-keepers to make co-operative experiments, and to engage in experiments last season. The average surplus of these men was 35lbs. per colony, compared with a general average of 16lbs. They also scored, he claims, in non-swarming experiments, counting only 5 per cent. against 35 per cent. attained by the non-experimenters. He notes that there were 7,222 colonies of Italians, 2,846 Blacks, and 5,422 "crossed Italians and Blacks." Recent issues of American bee papers have been discovering numerous virtues in black bees. Indeed, *Gleanings*, reasoning from a considerable amount of data lately to hand, speaks very highly of *dark* coloured as against *light* coloured bees. The latter are softer and less enduring.

The Sorrows of Experts.—In this country the lot of these men is not an enviable one at best, and seldom is it a bed of roses. On the other side their "inspectors" find a state of matters often leading to exasperation. Mr. E. Root says: "On some jobs they should have a hatchet, chisel, crowbar, frame-tongs, bee-gloves, bee-veil, clothes more than sting thick, and the patience of Job. Home-made hives and accessories make a combination which would often exasperate an angel." I

would respectfully submit this as a subject for "Blurts" to air his eloquence on.

Pollen in Honey.—It is well known to the initiated that honey contains a good deal of pollen grains. So well diffused are they that Mr. Hayes says in one of his recent articles (which I hope to have soon in book-form), "You can scarcely put in a needle-point without taking out pollen grains." This is useful in many ways. First, it enables us to tell if the honey is genuine. Then, by testing under the microscope, we are enabled to detect the source from which it was gathered. Further, it is a boon to the bees themselves, as by its help breeding may go on in spring when little has been stored, and before new supplies are to be had in the flowers. Dr. Miller points out that these bees, with a good supply of natural stores, will be stronger in the spring than colonies having only sugar stores, unless pollen stored combs are present.

Heather Honey.—It seems the true *Calluna vulgaris* is common in Germany. "Extensive areas are covered almost exclusively with this plant, which opens its blossoms in the first part of August and flowers on until about the middle of September. Skeps are then drummed off, and 'swarms,' 4lbs. to 6lbs., are sent to any part of Germany. The bees are hived on combs and then fed up with sugar syrup." Mr. Heberle, the writer quoted, also informs us that in Carniola *Erica carnea* grows especially abundant on the lower mountain sides, blooming early in spring, and it furnishes both pollen and honey, which aid the bees in building up. The honey from this source, he considers, is of very fine quality. I would repeat his query, "Are none of these heaths found in America?"

Bee-keeping in Japan.—"It is curious that, although different sorts of bees will cross each other, Japanese honey bees refuse to do so. That is to say, Japanese queens and drones will not mix with foreign drones and queens, and so they always retain their natural character," says S. Imamura in *Gleanings*. Inferentially, I think, he contradicts himself, for he tells us of bees brought from Europe whose brood spread over the southern part of Japan. They find Golden Italians not perfect, it would seem, as colonies of these a few years ago sold at yen 100 now fetch only yen 10, the value of the yen being about half a dollar, or a florin of our money.

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

CO-OPERATIVE SCHEME TO ASSIST MEMBERS TO RE-STOCK THEIR APIARIES.

Owing to the ravages of the "Isle of Wight" disease having seriously reduced the number of bees in the district, the District Bee-keepers' Association decided early this year to proceed with a scheme, the object of which is the creation of a central breeding establishment to supply colonies of known parentage to subscribing members.

The dread disease has for some time past ravaged the apiaries in many districts throughout the country, and it is considered that much of the loss caused by the "Isle of Wight" disease in this district is due to the indiscriminate importation of unknown bees.

By the kind permission of Mr. C. W. Knight the nucleus of the Association's new apiary has been favourably established in the grounds of Maypole House, Dartford Heath, where the first summer meeting of the members and their friends took place on Saturday afternoon, June 19th. About fifty visitors attended, and a lecture and demonstration by Mr. G. W. Judge was much appreciated.

The next summer meeting of the Association will be at the British Bee-keepers' Association Apiary, Zoological Gardens, Regent's Park, on the 17th July, when a demonstration lecture will be given by Mr. W. Herrod-Hempsall, F.E.S., secretary and lecturer to the B.B.K.A.

The Council of the Crayford Association invite kee-keepers and others interested in the subject to join them on this occasion, full particulars of which can be obtained from the assistant secretary, Mr. G. W. Judge, Barrowdene, Shepherd's Lane, Dartford.—*Communicated.*

EXPLOITS OF AN AMATEUR BEE-HUNTER.

One of the most fascinating outdoor sports, if one would deem it a sport, is bee-hunting. An ideal time to begin the hunt is some bright sunshiny morning, just before fruit-bloom, when there is not much nectar and pollen for the bees to gather.

First you will need a bottle of honey and a bottle of vinegar to dilute the honey. You will need something to feed the bees from. Take an old chalk-box and put a glass slide in the place of the wooden lid. At one end place a small trough or lid to hold your honey, and

bore a one-inch auger-hole at the other end in the bottom to let the bees in. A handy arrangement by which to catch the bees for the box is composed of two funnels made of wire cloth. Slip one into the other, so as to make it like a fish-net funnel, and close the small end.

You are now ready to go after them. Find some bees watering at some spring. Some on flowers will do; but if you can find some watering you can conclude that they are close by. Catch several bees in your trap. Then take them out in an open place close by and put them in your box through the auger-hole by opening the end of your catcher and thrusting it up into the hole. If they do not go up at once, darken the lower portion and then they will go up. Then darken your box by putting a cloth over it and place it in an elevated position. Wait about three minutes for the bees to fill up. After this time has elapsed remove your cloth and slide your glass cover out. At first they will fly around and around till they get their bearings. Then they will go in a straight line to their home.

After you get their line, and plenty of bees are coming to your bait, close the box with the bees in it. Move on in the course which the bees followed. Repeat this several times, all the time keeping watch for their den in the trees. If you will place yourself in a position so that the sun will be on the opposite side of the tree you can see them very easily as they fly back and forth.

My friend and I often hunt bees, and have never failed to locate them where we found them watering. If you don't find them the first time, keep trying, and finally you will succeed.

We found where bees were watering at a mountain spring about one and a half miles from home, so one bright morning we took our outfit and went after them. After we reached the place we followed the plan I have related and soon found two trees inhabited by bees. One was about a quarter of a mile from the spring, and the other about a half.

When we were ready to cut the trees the roads were very rough, so we just packed our things and carried them. We made two small hives, two storeys high, out of half-inch lumber. Each super held four frames 5⅝ inches in width, making eight frames to the hive. The bottom was nailed on, and the supers stapled together. When the weather is very warm we use a wire screen tacked on the top to give the bees plenty of air. It is very handy to have a rope to fasten around the hive at both ends; then you can swing it over the shoulder, and that makes it very easy to carry. We took knives, saws, and other tools for transferring the combs to the frames. It takes several hours to cut the tree and to transfer the combs and bees.

After bees get accustomed to their civilised life one can remove the frames from the small hive and put them in the regular ten-frame supers.—H. P. KIRBY, Scottsboro, Ala., from *Gleanings in Bee Culture*.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

WHICH IS THE DOMINANT RACE?

[9156]—An article in *Gleanings in Bee Culture* of May 15th, by Mr. W. L. Roberts, Lavalle, Wisconsin, leads me to think of a probable cause and remedy of "Isle of Wight" disease. The title of the article is, "Which is the Dominant Race," meaning the Blacks or the Italians. The idea I wish to draw attention to is in this quotation:—

> "Circumstantial evidence is added in the fact, admitted by all, that the so-called hybrids or cross-bred bees, after the first cross, show a breaking-up of all good qualities, lose their stamina, and become constitutional weaklings, and, of course, become much more subject to disease than pure bloods of any race."

There is undoubtedly much truth in this. It seems to me that the native bee of any country should be constitutionally strong enough to stand any disease or climate condition it is usually subjected to in its own country. The interbreeding of different varieties of bees, with a view to producing improved stock, differs from the breeding of domestic animals for the same purpose, in that we can never completely control their matings, with the result that such interbreeding

must always be accompanied by the production of a quantity of mongrel bees along with the so-called pure strains and hybrids. It seems to me that the offspring of first crosses of different varieties, as among domestic animals, generally may often be vigorous, but that further crosses will produce degenerates which are constitutionally weak. Thus, perhaps, the virulence of "Isle of Wight" disease is due to the extent to which our bees are crossed or mongrelised. If it is said that bees of known original stock take the disease, there are two replies. Firstly, it may be said that the disease is spread and brought to them by the degenerates, and, secondly, that it has been made more virulent by them.

If this is so, a temporary remedy may be by the use of drugs or by the importation or selection of pure stocks. But this could not be continued indefinitely. The permanent remedy would be to prevent the importation of all foreign bees, and so attempt in time to fix a pure or dominant British type. This may seem a drastic proposal; but what do we gain by introducing foreign bees? We may freely admit, if necessary, that some foreign bees and their hybrids are better than native bees in some respects, and still hold that, on the whole, it is very much better to keep to the native or dominant bee, and improve it by elimination rather than by selection. When all is said, is there really much difference in the economic results of any of the different varieties or hybrids? I think, in this country of boasted liberty, we need to learn to submit a little more, and to co-operate a little more in many things when it is proved to be for the general welfare. If it can be reasonably shown that the importation of foreign bees is, on the whole, detrimental, and that the maintenance and improvement of the dominant bee is desirable, I think a majority of bee-keepers would vote in favour of such restriction. If bee-keepers would co-operate in severely eliminating all defective bees, then, even if no positive selection were made, I think we should soon have a pure or dominant British type, which, for this country, would, taking all things into consideration, be equal to or better than any foreign or hybrid variety that we can introduce or produce, and that disease in a severe form would be at an end.

To sum up, if the foregoing suggested causes and remedies are correct, there are two things we should do to rid our country of "Isle of Wight" disease, and incidentally at the same time improve the bee and bee-keeping, firstly, ask Parliament to legislate against the importation of bees, and, secondly, co-operate in eliminating all defective bees, while leaving Nature to do her part in producing the dominant type.—T. T. Taylor.

AN APPEAL.

[9157]—Would any kind bee-keeper, lady or gentleman, who has a lady's cycle about that they could spare, be so good as to give it to me for a lady Belgian refugee who is doing all she can to support herself, her mother, and two sisters? Hers is a particularly hard case, as they are living in the country and she can only find occupation in the nearest town, three miles distant, and so much walking makes her so tired and not fit for her work. The father is dead, and the only brother has not been heard of since last September. We are doing what we can to make them happy and comfortable, and if I could get a cycle for her it would be a lasting benefit to them, and one they would appreciate very, very much.

Thanking some kind donor in anticipation.—R. Litman, South Street, Castle Cary.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

EXPOSED NYMPHS.

[9011]—(1) *Re* your reply (9010) in issue of 24th June to "Twenty Years' Subscriber," I have noticed in a hive in my garden here that some of the brood has not been properly sealed, and your explanation does not, I think, meet the case. There is no disease, no wax moth, and no naphthaline has been in the hive for twelve months, but this, perhaps, is

not noteworthy, as only a few cells were not properly sealed.

(2) Another case under my observation is worth considering. On June 8th, when stopping on Dartmoor in a cottage lent by a friend, I obtained a swarm from a skeppist and put them in an empty hive there. They had one stock in the garden before—healthy and doing well. I was only able to give them a couple of old empty frames, no comb, and four frames with pieces of section foundation as starters. A couple of days ago I went out with some more frames and foundation for them and found they had built four frames of comb, and had brood sealed, but not properly capped. The brood could be seen in nearly every case, and the interior parts of some larvae were rather dark in colour, like strong sunburn.

The bees hadn't "I.O.W." disease; there were no wax moths. I have never seen a wax moth there during the last five years I have known the place, though the owner is very careless, and no disinfectant has ever been in the hive.

I should like your opinion on the case, as I attribute it to lack of wax, the wet weather setting in soon after the swarm was hived.

Down in the village, ½ mile below, the bee-keepers have lost all their bees through "I.O.W.", but up at the cottage the stock was all right. A neighbour skeppist has fifteen stocks or so and has not had the disease. She is a lady who appears to have a good knowledge of bee-keeping, but prefers skeps. She attributes the healthiness of her bees to the fact that they are kept in a little plantation of various kinds of fir trees, larch, pines, Australian "Christmas trees," and the like. (3) Do you think this the explanation?

Another thing I have not quite accounted for is the forward condition of bees on the moor. I have heard it attributed to whortleberry (bilberry), but they appeared strong in the beginning of May when worts out there would hardly be flowering. The place is 1,000ft. above sea level, and I don't know what other flower sets them going. There is only a small apple orchard about ½ mile away and some 500ft. below.

I should be glad of your observations on my rather lengthy letter, and with thanks in anticipation.—DARTMOORIENSIS.

REPLY.—(1) You will notice we gave two possible causes. In your case it may be wax moth, but an unsealed nymph may sometimes be found here and there. (2) We cannot give an opinion without examination. (3) It is possible that the air laden with the scent of the pines may be the cause. (4) They probably went into winter quarters with an abundance of stores and young bees.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

JESSIE WESTWOOD (Bournemouth).—*Flowers for Bees.*—Early spring flowers are the best for helping bees, such as Aconite, Crocus, Snowdrop, Arabis (single), Wallflowers, &c.

"BUSY BEE" (Tewkesbury).—*Moving Bees in Van with Furniture.*—It will be safe if you can place them outside the van. Do not pack them among the furniture. See reply to "Oboe" in "B.B.J." for July 1st.

A. MERCER (Kincardine).—You can get them from any dealer. They are also advertised in our columns this week.

M. MCLAREN (Berks).—We think that under the circumstances you would be quite safe in giving a guarantee that they were healthy when despatched from your apiary. It is advisable to get a reliable, independent expert to examine, and give his opinion of them.

M. D. (Midlothian).—Honey is not coming in fast enough, and you have not enough warm covering on the top. Put on three or four more thicknesses of felt, flannel, or carpet.

A. CLEGG (Sale).—(1) You would be able to work them up strong enough to winter if you introduce a laying queen. It is safer to rear a queen, especially in your circumstances. (2) If they become crowded the bees will build comb outside brood chambers. (3) The eke should have been removed about the end of March. (4) It would not be likely to work, as the majority of the bees in the super would return to the old hive.

W. DAY (Hersham).—The queen is not yet mated.

MISS BRUCE SMITH (Hants.).—Once a week inside and twice a week outside. We do not know the address mentioned. The proprietors would probably forward a letter if you send under cover to them with stamp. In the other case we believe the bees are now all dead. There is no fee, thanks. See note at head of this column.

"WAITING" (Mollinsburn).—Sorry we cannot give you any reason for the loss of your queens. The one you sent did not appear to be old, and was quite normal. Possibly you do too much manipulating.

L. M. C. M. (Beckenham).—(1) No. (2) It depends on the quality, from 8s. to 10s. per doz. (3) There would be plenty of forage for that number.

F. C. W. (Wisbech).—The honey is good and suitable for a local show. It must be perfectly clear and free from bits of wax or froth. You should read *Producing, Preparing, Exhibiting, and Judging Bee Produce.*

Suspected Disease.

W. T. H. (Wrentham).—Sorry we cannot trace the bees. They have probably been lost in the post. Can you send us some more and describe any symptoms you notice?

W. THORNE (Wrentham), J. REDMAN (Dalston).—The bees are suffering from "Isle of Wight" disease.

R. N. C. (Boston).—It is "Isle of Wight" disease. Burn them for the sake of the other stocks.

R. COOPER (Leicester).—It is "Isle of Wight" disease. You cannot do more than follow out the instructions given in the "B.B.J." during the last few weeks.

F. H. W. (Dunsandle).—We do not find disease in the bees sent. If you notice a number of "crawlers" send us a few of them.

E. S. G. (Suffolk).—(1) Yes. (2) They are natives with a slight trace of Ligurian.

WYKE (Castle Cary).—The bees are suffering from "Isle of Wight" disease.

Honey Sample.

M. E. H.—The flavour of the honey is fair, but it is rather thin and contains a large number of pollen grains. We do not think you will get more than 56s. per cwt. for it.

WEATHER REPORT.

WESTBOURNE, SURREY.

June, 1915.

Rainfall, 1.11in.	Minimum on grass, 32, on 20th.
Below aver., .99in.	Frosty nights, 0.
Heaviest fall, .30in, on 29th.	Mean maximum, 65.4
Rain fell on 8 days.	Mean minimum, 49.2
Sunshine, 220.9 hrs.	Mean temperature, 57.3.
Below aver., 16.1 hrs.	Maximum barometer 29.842, on 8th.
Brightest day, 15th, 15 hrs.	Minimum barometer 30.242, on 18th.
Sunless days, 2.	
Maximum temperature, 75, on 8th.	
Minimum temperature, 35, on 1st.	

L. B. BIRKETT.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Tuesday, August 3rd, 1915.—Bridgnorth and District Bee-keepers' Association, held in connection with the Hampton Loade Horticultural Society. A good prize schedule, open to Shropshire, Staffordshire, and Worcestershire, as follows:—Class I., 6 Sections of Comb Honey, 1st prize, bronze medal of Shropshire B.K.A.; 2nd prize, 5s.; 3rd, 2s. 6d. Class II., 6 Jars Run or Extracted, any colour, 1s. each entry, 7s. 6d., 5s., 2s. 6d. Class III., Open Gift Class, 1 Jar, to be sold by Association, 7s. 6d., 5s., 2s. 6d. Class IV., Open Gift Class, 1 Section, to be given to wounded soldiers, entry free, 7s. 6d., 5s., 2s. 6d. There are nine Classes for Members of the Association. Schedules on application to J. S. Lawton, 77a, High-street, Bridgnorth. Honey to be addressed to J. S. Lawton, Hampton Loade Station, G.W.R. —**Entries close July 26th, 1915.**

Monday and Tuesday, August 16th and 17th, 1915, Cannock, Staffs.—Honey Show, in connection with the Horticultural Society's Show. Eight open classes. Schedules from J. Bird, F.R.H.S., Glenmay, Cannock.

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	27	0	0
Exhibitor		2	6
	£27	2	6

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

PRIVATE ADVERTISEMENTS.

WANTED, screw top 1lb. and ½lb. glass bottles, caps not necessary.—NORMAN, Kitchener-road, High Wycombe. v 44

SWARMS for sale, established on frames, price reasonable.—BAKER, 6, Walsingham-road, Clapton, London. v 37

FOR SALE, first quality sections, 8s. 6d. dozen. —F. COUSINS, Misterton, Gainsborough. v 38

FOUR lots driven bees, last week in July, 6s. per lot; boxes returnable.—E. THOMPSON, Gowdall, Snaith, Yorkshire. v 39

QUEENS, 1915.—Several Black, Banat, and Italian, fertile, warranted prolific and free from all disease, 5s. each; prompt despatch.—F. W. HARPER, Lyndhurst, St. James's-road, Watford. v 47

FOR SALE, good stock, on seven frames, 15s., with hive, 30s.—DARBY, Malston, Newton Abbot. v 40

WANTED, two or three standard hives, complete, ripener, and extractor, &c., all good condition, cheap for cash; give particulars; offers invited for fifteen to twenty box hives and 1914-15 bees, healthy, good workers.—EVANS, Erwood, Breconshire. v 41

HONEY EXTRACTOR WANTED, in good order.—COLE, Carlton House, Rodbourne, Swindon. v 42

FOR SALE, healthy swarms, in skeps, June 23rd and 28th, 16s. and 17s. 6d.—KEYTE, Gordon-road, Harborne, Birmingham. v 43

FIVE, six, seven-frame nuclei, brood in all frames, with young laying queens, 15s. to 17s. 6d.—BARNES, Bourdon-road, Anerley. v 45

FIVE strong, healthy stocks of bees, each on 10 frames, 30s. each; several May and June swarms, on 6 and 8 frames, full of brood and stores, at 3s. 6d. per frame, f.o.r.; boxes returnable carriage paid, or 4s. 6d. each extra; cash with order or deposit.—J., 9, Sunnyside-road, Ilford, Essex.

WILL give services to look after apiary, if owner wants to go to the front; have been keeping about twenty experimental hives for ten years, but have lost them through "I.O.W." disease; age 54.—BELLERS, Bacton, Ottery St. Mary. v 26

LARGE table pigeons, wish to clear, 10s. to 12s. per pair.—STUART, Hope-street, St. Andrews v 36

TRICAR, Humber, water cooled, good running condition, £20; or exchange for bees and appliances.—WHITEHEAD, Eccleshill, Bradford. v 34

ITALIAN home-raised queens, fertile, 1915, from imported mothers, 5s. each.—OLIVER KNIGHT, Epney, Stonehouse, Glos. v 33

PURE English clover honey, granulated, 58s. cwt.; sample, 2d.—BUTTON, Haverhill, Suffolk. v 18

HAVING obtained larger one, will sell Green's 10in. lawn mower, 8 knives, and grass box, 25s., or offers, in excellent condition.—HERROD-HEMPSALL, Apiary, Luton, Beds.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

HEALTHY natural swarms for sale, 7s. 6d.—Apply, QUEENIE McENERY, Rossenarra House, Kilmogany, Kilkenny, Ireland. v 16

FOR SALE, swarms, 12s. 6d., carriage and box free; stocks, boxes and skeps, 16s., carriage forward; good stocks on six frames, 25s.; also sections and extracted honey.—NORRIS, Barracks, Cashel, Ireland. v 21

SALE, honey, excellent quality, granulated, last autumn's, in 28lb. tins; sample, 3d.—COLE, Roxholme, Sleaford. v 86

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

WILKES' free-way excluder and non-swarming method have resulted in enormous takes of honey; sample excluder, 2s.; illustrated work explaining prevention of swarming, with many photos, 1s. 1d.; send for 1915 catalogue, all post free.—WILKES, Four Oaks, Birmingham.

CHOICE PROLIFIC ENGLISH QUEENS, 1915, selected and tested, bred from non-swarming stocks, 5s. 6d. each; safe arrival guaranteed; 12th year.—ARTHUR H. WILKES, Four Oaks.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

FIRST-CLASS IRISH HONEY.—Tenders are invited for the purchase of up to ten tons honey; sections graded in three classes; run honey in bulk or bottle.—Apply, SECRETARY, Kilkenny and District Bee-keepers' Society, Kilkenny. v 46

SWARMS and nuclei for sale, no disease in apiary.—MAJOR MAXWELL, Glenlair, Dalbeattie. v 47

PURE bred heavy-laying pullets, noted strains: Orpingtons, White Wyandottes, R.I.R., Leghorns, Light, Speckled Sussex; guaranteed healthy, true to type, reasonable prices; eggs for hatching; day old chicks; write for particulars; also swarms and stocks of bees.—DOLLIS PARK POULTRY FARM, Church End, Finchley, London, N.

NOW booking nuclei, ready third week July, 4-frames, 12s. 6d.; 6-frames, 16s. 6d.; full of brood, with selected young queen, White Star Italians by arrangement; choice 1915 queens ready for despatch, healthy; particulars, stamp.—CROWE, Stawell, Bridgwater. v 32

SECTION Glazing, lace paper strips, 7d. per 100; lace bands, 3in., 1s. 3d. per 100, post free; good section racks, slotted dividers, followen and wedge, complete, 1s. 6d., as new; also section racks, complete, 1s. 3d. each.—W. WOODLEY, Beedon, Newbury.

BRICE'S BRONZE MEDAL QUEENS (23rd season), special 7s. 6d., selected 5s. 6d., guaranteed.—BRICE'S APIARIES, Green-street Green, Orpington, Kent.

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d. post free.—PRESSEY, Carshalton-hill, Conlsdon, Surrey. v 41

MEADOWS THE BEST BEE APPLIANCES
SYSTON near LEICESTER *Send for* **KAT-A-LOG**

RETIREMENT OF MONS. ULR. GUBLER.

The Swiss bee-keepers and the bee world generally have lost one of their active veteran leaders by the retirement of Mons. U. Gubler from the editorship of the *Bulletin de la Société Romande d'Apiculture*, and also as President of the Society, a position which he has held with such distinction for so many years.

He was born in a small village near Frauenfeld, and studied at the normal school of Kreutzingen with the view of becoming a teacher. His desire was to devote his life to the education of abandoned and unfortunate children, and to render himself efficient for this purpose he passed six years of probation as junior master at the Bächtelen school for poor unmanageable boys, near Berne. He was considered so well adapted for this career that he was appointed director of the orphanage at Grandchamps, and since 1876 he has had the direction of the orphanage at Belmont, belonging to the city of Neuchâtel. Here he was much beloved by all who came in contact with him, and we were on several occasions when we visited him much impressed by the manner in which the children and

MONS. U. GUBLER.

others of the establishment looked up to and reverenced him. The garden, orchard and everything on the property showed the careful supervision of the director, and the happy children at work in the fields gave evidence that they were ruled by love and not by force. It was, therefore, not surprising that we here found a well-kept apiary which not only provided honey for the establishment, but was a means of instruction to the boys, and the lessons there learnt would without doubt be put to good use in their future life.

It was in 1862 that M. Gubler came across Dzierzon's work "Rationelle Bienenzucht" in a library, and was so fascinated with it that he could not put it down until he had read it through. The subject interested him so much that he decided to get a hive of bees, and he found a colony in an abandoned apiary with which he made a start. He had not much encouragement, for the proprietor said the district being too near the lake was not a good one, and the bees had to be fed as they could not store enough honey to live upon through the winter. This, however, did not discourage M. Gubler, who from day to day became more interested in the bees, and after five years found himself the owner of twenty prosperous colonies. Bee-keeping now so engrossed his attention that he spent all his spare time in the apiary. In 1888 he made the acquaintance of M. Bertrand, and soon perceived the advantages of the "Dadant" type of hive recommended by him, over the "Burki" which M. Gubler was using. Ten years of observation with ten Dadant and twenty Burki hives showed that the former suited his district best, the proof being obtained by systematic and careful weighing. In 1890 M. Gubler was induced by M. Bertrand to write for the *Revue Internationale d'Apiculture*, and in 1903 when M. Bertrand retired, the Société Romande d'Apiculture decided to issue the *Bulletin*, and very wisely confided the editorship to M. Gubler, who has carried on the work so satisfactorily up to his retirement. He commenced his writing for the *Revue Internationale* by giving the results of the weighings of hives, which led other bee-keepers to keep a hive on scales and register daily observations, so that now every section of the Society has its appointed observer who supplies the central station with data for the annual report. The results have been tabulated for the last twenty years, and graphically depicted by M. Gubler.

Since 1903 M. Gubler has been President of the Society, and year after year he was re-elected by acclamation, the members being proud to feel that he was always at the head of their Society. Now that he has retired at the age of 80, the members have unanimously nominated him Honorary President of the Society, as a mark of their esteem and appreciation of the services he has so disinterestedly devoted to the well being of the Society for more than a quarter of a century.

On his attaining the age of 80 on the 18th May he was feted brilliantly. The Government of Neuchâtel sent a delegation to offer him the citizenship of the Canton, which is considered in Switzerland an exceptional honour, as M. Gubler is a native of Thurgau, and such honours are usually restricted to natives of Cantons. The City of Neuchâtel has also honoured him by offering him the freedom of the city. There were also present deputations of former pupils of Belmont, a delegation from Boudry, the town in which Belmont is situated, and another from the orphanage of Neuchâtel, as well as a deputation and an address from the Bee Society, "La Côte Neuchâteloise." All these were under the direction of M. Quartier-La-Tente, director of public Instruction and Worship of the Canton.

No one has better merited these expressions of high esteem and gratitude than our excellent friend and colleague, and we hope he may live many years to enjoy the retirement he has so well earned.

REVIEW.

FACTS ABOUT HONEY.

Under the above title the Gloucestershire B.K.A. have published a two-page leaflet with the object of helping to popularise honey, especially English honey, produced in Gloucestershire. It is not stated whether the leaflet is sold to members for distribution, or given away.

The idea is a good one, and should be considered by other county associations. The facts given are very concise and telling, and, of course, are for the *consumer* more than *producer* of honey. We append a few quotations:—

"Sugar is no more a substitute for honey than paper is a substitute for cloth. Honey is, far more than jam, a food as well as a condiment. The entire bulk of honey is nourishing. Honey on plain bread is excellent; on toast it is perhaps better still. To dispel a cold or relieve asthma there is nothing like honey and lemon in hot water. In other countries honey is found on the breakfast table every morning. Why not in England? No imported honey is so good as

English, and much of it is far inferior. The more we buy and the more bees are kept the more abundant will be the fruit crops for which our county is noted, and the greater the prosperity of our agriculture."

NOTTS. BEE-KEEPERS' ASSOCIATION.

HONEY JUDGING COMPETITION AT THE ROYAL SHOW.

Eight samples of honey were submitted for this competition, and, as regards their source, the result of the microscopical examination was as follows:—

POLLEN GRAINS.

Sample No. 1.—Clover, lime a few.

No. 2.—A mixed fruit honey—hawthorn, apple, bean, gooseberry, plum, and a few clover.

No. 3.—Clover, with just a few others.

No. 4.—Apple, hawthorn, sycamore, chestnut, melilot, honey dew (tree honey).

No. 5.—Heather blend, clover, heather, etc., etc.

No. 6.—Mainly clover, a few odd grains of heather, etc.

No. 7.—Calluna vulgaris chiefly, with erica cinerea, clover, etc., etc.

No. 8.—Clover, chestnut, compositæ, etc.

Putting out of court any heather or heather-blend as per conditions, the placing of the remaining samples by the judges was as follows:—

1st ..... No. 3
2nd ..... No. 6
3rd ..... No. 1

The prize-winners are as follows:—

1st—Mr. W. Dixon, Leeds, 30 marks for source, 25 marks for placing; total 55.

2nd—Mr. J. T. Willson, Shirebrook, 26 marks for source, 25 marks for placing; total 51.

3rd—Mr. J. Herrod-Hempsall, Luton, 25 marks for source, 25 marks for placing; total 50.

Highest possible—40 marks for source, 30 marks for placing; total 70.

GEO. HAYES,
Secretary.

SUFFOLK BEE-KEEPERS' ASSOCIATION.

EXAMINATION IN BEE-KEEPING.

At the monthly meeting on Tuesday evening, the Hon. Secretary, Mr. O. C. Jones, announced that he had made arrangements for an examination in bee-keeping, for the third or elementary certificate, to be held at Ipswich on Saturday, July 31st, and he asked for as many candidates as possible, pointing out that there was room for more experts in the county. The examination will be conducted by Mr. W. Herrod-Hempsall.

Mr. F. S. Elliott then gave an address devoted principally to various hints in management, etc. He advocated more ventilation to be given in the hives during the honey flow in hot weather by inserting thin strips of wood between the brood-chamber and the floor-board, and also recommended bee-keepers to go in more for extracted honey than for sections. By giving more ventilation and working with shallow frames for extracted honey he considered that excessive swarming, such as had been experienced in some districts this year, could be avoided. He stated that the condition of the brood-chamber of the hives should receive special attention during the Spring and Summer, as in many cases there was too much honey and pollen in the brood-chamber, which hindered the work of the queen and tended to make the bees swarm. Mr. Elliott was thanked for the lecture, and Mr. T. Edgar Mayhew for presiding and for the use of his office for the meeting.

HEREFORDSHIRE BEE-KEEPERS' ASSOCIATION.

At a committee meeting held on Wednesday it was decided that the annual honey show shall not be held this year, and that no prizes will be offered in honey classes at horticultural or other local shows.

BLURTS FROM A SCRATCHY PEN.

A VISIT TO JERSEY.

Le Vallon is an ideal location for an apiary, sufficiently distant from the shore not to be disturbed by storms, from which, indeed, it is sheltered by well-timbered lands. The pasturage is, as I have mentioned previously, rich in every nectar-bearing flower. The fruit trees, the sycamore, chestnut, and hawthorn blossom earlier in the season by nearly three weeks than our own, and in the

fall of the year the last blossoms from which the bees take toll may be seen in brilliant splendour when our own are shrivelled up by the heralding frost of the coming winter; and disease is unknown in the island. Our little friends, therefore, have here a happy time, but, strange to say, they don't seem to appreciate it. One would think, that in such a paradise on earth the bees would be eternally in the best of tempers. Plenty of food, plenty of moisture, and not a care for the future, what is there to upset their equanimity; and yet, believe me, I have seldom come across an apiary, taken as a whole, which was more irascible. And now comes a strange thing which "no fellah can understand," as Lord Dundreary was wont to say. I am one of those so deeply inoculated with formic acid that I seldom need a bee veil. Yet, during the whole of the six days in which I was working among these bees, I could not do without my vizor. But these same colonies, moved to England within three days, both others and myself have found harmless as flies. How is this? Can someone more clever than I am tell me the reason? Don't attribute the change to "mal-de-mer." I had them under immediate observation during the whole of their six hours' voyage. I assure you I saw no signs among them of any sea-sickness. They were stowed on the lower deck, and the waves were so gentle there was little or no heave. Here is a riddle; can anyone "rede it aright?"

Now to return to our starting-point, the ideal apiary of Le Vallon. And let me, in passing, pay a tribute to the hospitality and kindness of Mrs. Falle and her daughter. Their only son, the bee-keeper, is serving his King; God grant him a safe return. The house at the foot of a rising knoll stands back sufficiently from the road to ensure that privacy which we Britons seem to find so necessary for comfort, but which our American cousins, innocent of hedges and fences, cannot understand. From the carefully kept garden a footpath zig-zags up the hill. At the corner, where the way turns on itself, you get a glimpse through the trees of the landscape—meadows, with white farm buildings, other woods, and other valleys. The mossy carpet is soft and green under the shade, except where a tinge of brown tells that the vestiges of the last season still remain. The blue-bell raises gracefully its stem, arched at the neck, and flowerets bend downwards in their modesty; yet filching from the heavens above it a little of azure wherewith to paint the nooks and shades wherein it dwells. The first shoots of the bracken are beginning to pierce the ground, crook'd as a Bishop's crozier, giving promise of cover for the hare and rabbit and "such small deer." I love the spring time; I have often written of it; I am never tired of writing of it; I hope to write of it again.

Another sharp curve and we are with the bees, a glade in the woods, or perhaps rather an inlet into them, fenced off from rovers, both human and bovine, by high fences. The rude North and the searching East winds are warded off by the surrounding trees. There is space, if well arranged, for a hundred hives altogether. As I have said before an ideal spot for an apiary, but I do think if I were the owner I should arrange a miniature tramway from the level to the summit, on the same principle as those in the coal pits, the loaded cars to draw the empty. When one has turned the fifties those hills are decidedly inconvenient to mount, especially if you have such baggage as section racks, bee hives, and the numerous implements of our craft to carry.

May I be allowed just one more description to tell you of the view from among the hives. I ask permission because I have already wandered much from bee-keeping. I am sitting on a raised bank, forming one side of our oblong. To my left the eye wanders over woods and meadows; in the far distance is the soft grey smoke of St. Heliers. Beneath, within a mile or two, is the sea-shore. The tide is out, and again I see those cruel granite teeth made to rend and grind. In the middle distance is Goree Castle. Irresistibly one is reminded of Monte Cristo and the Château d'If, a bold castellated rock jutting out from land into the sea. In old days it must have been almost impregnable. Now, in the shadows of the setting sun, nestled in a blue haze, it seems all peaceful and quiet. And the sea? To-day not even Naples and its Bay rival the blue; but my sight is attracted further over and beyond the castle, further than that arm of the sea. What are those white cliffs, and, in the very far distance, those hills? Those are "The Hills of Normandy." I am thrilled with the beauty of the scene, and most of all by its intense repose and peace. Yet! were I on those far off hills I should bend my ear to listen for the roar of the cannon!—J. N. SMALLWOOD.

SWARMING VAGARIES.

The saying that "bees do nothing invariably" has been quoted so often that it is almost threadbare, but in nothing that bees do is its truth better proved than in that proceeding known as swarming. No doubt many of the readers of

the "B.B.J." have had experience of their vagaries one time or another. At times they are determined not to accept a new home that has been fitted up, one would think, with all that the heart of a bee could desire. I have known a swarm hived and rehived seven times before it would consent to remain. Again, what outlandish places they will choose for clustering!—on an iron palisading, the trunk of a tree, in the heart of a thick thorn bush, dog kennels, rabbit hutches, street lamps, on the ground, the side of a ditch, scarecrows, and even on human beings. Where have they *not* clustered? Probably there is nothing a novice in bee-keeping looks forward to with more trepidation than having to hive a swarm. Of course, the text-books all tell how to shake a swarm into a skep or box, and probably give an illustration of a swarm hanging in the most convenient manner possible for the operation; but how often does this happen in reality? A bee-keeper told me that when he commenced the craft he read up all he could find on swarms, and how to take them, and thought he was then well primed and able to take a swarm wherever it was. The first that came off managed to find a position that had not been provided for, and he was thrown on his own resources after all. In taking a swarm there is often scope for the bee-keeper to exercise his ingenuity; if he is one of those whose only idea of taking a swarm is to "shake" it he will be nonplussed at times. I have heard of two such who had swarms on currant or gooseberry bushes. The bottom of the swarm touched the ground, and their only idea was to dig a hole underneath large enough to take the skep so that the bees might be shaken into it. To shake the bees on to the ground and place the skep over them never occurred to them.

I give below an article from the *Field* by Mr. Herbert Mace, which gives a few of his experiences with swarms, and also a few cuttings from other papers, showing that this year has been no exception to the vagaries of bees when swarming.

"Unless there were some reasonable certainty that bees will, under normal conditions, act in a certain manner in certain circumstances, bee-keeping would not be possible, for centuries of apiculture have not advanced us one iota in the direction of domesticating bees. They still occupy, and are likely for ever to occupy, an entirely different position in regard to man from that of any other class of stock. A swarm of bees taken from a hollow tree, where they have been wild for generations, is quite as easy to control as one issuing from a hive which has been under the hand of a bee-keeper during the lifetimes of him and his father, and his father before him. It is only by accommodating our treatment to the known disposition of the creatures that we are able to do anything with them.

"At the same time, it is the case that bees do act in an unaccountable manner sometimes. Only a week ago I happened to catch sight of a swarm rising from a hedgerow, where it had evidently been taking the preliminary rest. Where it came from is not known, but probably from a hollow tree close by. To the best of my ability I followed it, but having lost sight of it, I heard no more of it until an hour or so afterwards, when I heard that it had gone in the direction of a garden where bees are kept. I happened to know that there were empty hives standing there. The bees had died during the winter, and the owner had not removed the combs, being one of the old-fashioned 'let 'em alone' bee-keepers. I knew for a practical certainty that the bees had gone into one of these hives, so I called on the owner, and together we visited them. Sure enough, the swarm was going in. The owner's idea was that it was his bees come back again! He was convinced of it, and told me the same thing often happened. I did not argue with him. Such people are hard to convince, but in the course of the evening I saw him again, and with a rueful face he told me the bees did not stop but had come out again and flown right off. Now, what was the reason for this? Although not an ideal hive from the bee-keeper's point of view, yet there was nothing the matter with it from the bee's, as it was roomy and there were good clean combs all ready. There were, as far as I could see, no traces of mice, which sometimes account for bees taking a dislike to a place. Evidently there was some strong objection, for it is rarely a swarm leaves when once it has settled down amongst combs.

"Another curious case happened in my own apiary. A hive almost on the point of swarming, having sealed queen cells, was made into two, the old queen being removed with two frames of bees to a new site and given two extra frames. In three days' time one of the new frames was sufficiently far advanced to have eggs laid in it, yet the next day the bees disappeared entirely, with the exception of a few newly hatched ones. There was no sign of a queen cell having been left by accident, and there were plenty of bees on the day before. It was to me quite inexplicable. I remember another curious case, which was certainly more easy to account for. A swarm having issued was duly hived on frames of foundation, but issued again in an hour's time and entered a hollow tree in the garden. It was left

till evening and hived again. The next day it went back to the tree. Again it was hived, and once again it seemed determined not to settle down except in the place it wished to occupy. Finally, the difficulty was overcome by finding the queen and clipping her wing.

"There is another curious happening which is only partly explainable, and that is the length of time which elapses between the issue of prime and second swarms. As a general rule, the first young queen leaves her cell about two or three days after the prime swarm leaves, and about a week after second swarms may be expected. In fact, it is a standing instruction in bee-keeping manuals to look out for casts on the ninth or tenth day. Occasionally, when two or three days of bad weather have delayed swarming, the queens will come out of their cells before the old one leaves. I was told recently of a case where the hive was examined immediately after the swarm had left, and six virgin queens were found roaming about the combs.

"On more than one occasion I have known a prime and second swarm to come out at one and the same time, so that two bunches of bees were seen hanging not far from each other. The last time I saw this happen the weather had been continuously fine for some time previously, and therefore the proceeding was quite out of the ordinary.

"Doubtless these things can be explained, and it is quite possible that we may from time to time discover a great deal more about the likes and dislikes of our little friends. Old as the craft is, real knowledge concerning the life of the bee is quite a modern acquirement."

BEE SWARM IN CARDIFF.

Passers-by in Penarth Road, Cardiff, on Tuesday were witnesses of an unusual incident. A huge swarm of bees came on the scene, and as they buzzed about in myriads at the Clare Road junction they formed a dense black cloud in the air. Presently the queen bee settled on the stone pillar of the gateway of the house next door to the chapel, and she was soon followed by thousands of others. All the bees could not find a resting-place on the pillar, and hundreds continued to fly round about it. Later the bees were removed by Mr. J. Boyes, of Bridge Street, who is an expert on bees.

A similar incident occurred in the town last week, when a swarm of bees invaded the Court Road schools.—From the *Western Mail.*

BEES AT LARGE.

At the goods yards of the railway station at Clonmel recently a stray swarm of bees attacked those working in the yard. A pair of military horses attached to a waggon, which was standing in the yard, were also attacked, and very badly stung. The animals could not be kept under control, and kicked wildly. One broke loose, but fortunately no serious damage was done. The animals were very badly injured, and had to be brought to a veterinary surgeon. Almost all those engaged in the goods yard were stung by the bees, and one porter, a man named Hally, who was rather badly stung in the throat, had to go to a doctor for treatment.—From the *Freeman's Journal.*

WAR REFUGEES.

BATTLEFIELD BEES SEEK THE CALM OF PARIS.

A couple of days ago the business quarter of the Rue de Châteaudun was invaded by a strange horde—no less than a flush of swarming bees which, following their queen, began to hang in a cluster from one of the lampposts. After a while the police commissary sent for a renowned apiculturist, who arrived with the usual paraphernalia, but the bees turned a deaf ear to all the time-honoured wiles of the charmer, and stung one or two of the too curious public. Finally, the firemen, who are generally a last resort, were called out, but it was decided that it would be better to deal with the bees by the aid of science rather than of brute force and water. Taking a leaf from the German book, the wretched bees were subjected to poisonous gases, and in two minutes they were all reduced to senseless harmlessness, and swept away in a bucket.

Recently the same phenomenon occurred again, not far from the same place, but this time the bees, as soon as they saw that they were not welcomed as they had doubtless been accustomed to be, took flight, without waiting for chloride gas. The incident is very curious, and it is almost certain that the creatures had been driven from some accustomed hiving-place in the north by the ceaseless hurricane of fire, smoke, and thunderous explosions. But that they should have twice chosen Paris streets is a singular testimony to the bucolic calm that reigns in the capital that has the reputation of being one of the noisiest in the world.—From the *Standard.*

BEES AT FINSBURY.

A remarkable swarm of bees have been attacking people in the districts of Finsbury. As the Finsbury boy might have

said to the bees after being stung, "Beehive! Beehive!"—From the *Sporting Times*.

What the perpetrator of the last paragraph deserves I will leave to the imagination of my readers.—J. H. H.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

THANKS.

[9159]—I should like to thank you for publishing my request (9155, p. 228) for information about Shirley, and also those of your readers who have written direct to me in reply.

Twenty-one applications have reached me for the back numbers of the "B.B.J." which I offered to give away. I found in all twelve volumes of "B.B.J." and "Record," which I sent by rail, carriage forward, to the first twelve applicants (1 volume each). I was informed this end that the carriage would not exceed 6d., so I hope that all arrived in good condition, and that no one was overcharged.—L. Illingworth.

SOUTHFIELDS AS A BEE DISTRICT.

[9160]—Will you kindly tell me if Southfields, or Merton, would be a suitable neighbourhood for bee-keeping? I am a stranger here, but I believe Southfields is near Wimbledon. Mitcham, I am told, is all right for bees, but I am afraid it is too far at present from my work.

My house is at Woking, and perhaps you may remember my writing you *re* a July swarm last year, which you advised me I should have a lot of trouble with if I bought them.

As I could buy them for 5s., I thought I should get 5s. worth of experience if I had them and lost them in the end, while if I saved them I should have a stock to start this year with.

Well, they were all right until about March, when they developed what I think was dysentery. They soiled their combs, and on two or three occasions several crawled on the ground. So I tried putting them in a clean, dry hive, but when I had them in they were so few they died with cold about four days after.

I disinfected the hive with hot strong solution of Izal, and got a nice swarm from a local bee-keeper, and they seem to be going on well.

A swarm came off on the 5th May, and was put into a skep. I intended putting them into a frame hive on the 10th, but they had become established and built comb; in fact, there were eggs in the cells, so rather than run the risk of breaking down the comb I placed the skep over eight frames filled with foundation. In twenty-six days I got the expert (Mr. Aubrey) to look at them, and found they had filled the skep with comb, all brood cells were sealed, and there were sealed brood cells in some of the frames. They had nearly worked out four combs in the frames. Mr. Aubrey advised leaving them for a week and then to put on an excluder. The following Sunday we examined them again and found they had worked on all eight frames. We put the remaining two frames filled with foundation in and put on the excluder. The idea was to drive them, but an examination of the bottom combs showed the queen was down below (she was going over the cells laying eggs), so we had no need for driving. They are a Golden bee, and the queen is very large with black head and a reddish-brown body like polished dark walnut.

They were very quiet when Mr. Aubrey was looking over the combs. They never troubled a bit; in fact, he said he thought they had no stings.

My little girl is very interested, and says she is fond of the bees.

I missed my "B.B.J." for two weeks, but am getting it regularly up here now.—C. H. Orchard, 20, Inman Road, Earlsfield, S.W.

[Probably some of our readers who live on the spot may be able to tell Mr. Orchard the possibilities for bee-keeping in the district he enquires about.—Eds.]

HONEY COOKERY.

Honey Biscuits.—Two tablespoons butter, 6 tablespoons honey, 6 tablespoons flour, 1 teaspoon mixed spice, ½ teaspoon soda. Dissolve soda in a little warm water; mix honey and butter, and warm to melt it; add to this the dry ingredients gradually, then the soda; cover, and let it stand till next day; roll out thin and cut into

shapes; bake in a slow oven till of a light brown colour.

Honey Fruit Cake.—Take 1½ cups honey, two-thirds cup butter, ½ cup sweet milk, 3 eggs well beaten, 3 cups flour, 2 teaspoons baking powder, 2 cups raisins, 1 teaspoon each of cloves and cinnamon.

Honey Tea Cake.—One cup honey, ½ cup sour cream, 2 well-beaten eggs, ½ cup butter, 2 cups flour, ½ teaspoon soda, 1 teaspoon cream of tartar. Bake in a moderate oven.

From the *N.Z. Bee-keepers' Journal.*

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

QUEEN NOT LAYING.

[9012]—Will you kindly tell me why the queen in my hive is failing to lay? I bought a rather large swarm at Whitsuntide (Italians). They came out of a skep about three weeks before. They were hived in a skep, and, not having my bar-frame hive quite ready, I put them on a stand, little dreaming they would swarm, which they did, but I lost them. They came out and clustered for a short time, and then went straight away. I have now got the skep on the top of a bar-frame hive—as per instructions in Guide Book—on 10 frames filled with full sheets of foundation. They are working 8 out of the 10, and have started sealing some of the honey, but no sign of eggs or brood, either in the skep or in the bottom combs. There is a queen in the hive, as I saw her on one of the combs. I also saw her come out of the hive and fly (her head towards the hive) for about a minute, and then go back again. That was a fortnight ago, but there are no eggs up to the present. There are a fair amount of drones in the hive. Shall I have to requeen, or what must I do? I shall be very pleased if you will enlighten me.—H. G. Allaway.

Reply.—The queen had not mated and commenced to lay when you wrote. No doubt she will be all right by the time you read this. When you saw her flying she would be marking the location of the hive preparatory to going on her marriage flight.

BEES UNDER BEDROOM FLOOR.

[9013]—Having been a reader of the "B.B.J." for some time, I should very much like you to answer the following:—At the beginning of last season a swarm of bees entered between my kitchen ceiling and bedroom floor, the floor being woodwork. The bees are able to come up through, and have become a nuisance. Please tell me how and the best time to destroy them without injuring the honey. —P. D. Williams.

Reply.—It is difficult to give instructions without an examination. So far as we can see the only thing is to take up the floor over the comb, cut it out and brush the bees off. They could be got into a skep or box, and united to another stock. It would be well to get the help of an experienced bee-keeper if possible.

VASELINE FOR SUPERS.

[9014]—(1) Before putting on supers, should I rub the lower part with vaseline to prevent the bees from sticking them to the frames? Does a coat of vaseline require to be left on, or will a slight rubbing be sufficient? (2) Does the manufacture of comb foundation by the "Weed" process necessarily imply that the wax is sterilized of foul brood germs? —Gardener.

Reply.—(1) Leave a slight coat of vaseline on. (2) Yes. You may take it that "Weed" foundation is sterilized.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

W. H. White (Harlington).—*Queens from Italy.*—The last we heard of Sig.

Gaetano Piana several months ago, he had been called up to rejoin the army, and no doubt is now fighting his country's battles. Under the present circumstances it is not likely that any queens will be sent from Italy this season.

J. N. (Arbroath).—*Queen Cast Out.*—The queen was fertile, and a very fine specimen.

MacCowen Hall (Tenterden).—Bees will forage for about two miles round the apiary.

K. G. Poland (Caterham).—They are as prone to disease, and no better honey gatherers than natives, and are given to excessive swarming.

R. B. W. (Warwickshire).—The secretary of the Warwickshire B.K.A. is Mr. J. Ingerthorpe, Knowle.

C. C. S. (Maldon).—We have not received the samples of honey.

J. H. A. (Notts.).—You can get tins to hold 7lbs., 14lbs. or 28lbs. from any appliance manufacturers. Try and get some grocer or dairyman to take it, or advertise it in the "B.B.J." A good idea is to put it up in "family" tins of 3½lbs. or 7lbs. If you are a member of the Notts B.K.A. take advantage of their "Members' Exchange Mart."

Honey Samples.

M. (Birmingham).—A very good sample of granulated honey, a mixture of Clover and Charlock. The latter will account for it granulating so early. If you do not like honey in this condition you can reliquefy it by standing the vessel containing it in hot water until clear. Keep the water hot, but do not allow it to boil, or the flavour of the honey will be spoiled.

M. Broadhurst (Urmston).—The honey is from fruit bloom, and worth from 56s. to 60s. per cwt.

Suspected Disease.

X. (Lanarks), Mep (Castor), Oboe (Torquay).—The bees are suffering from "Isle of Wight" disease.

F. J. W. (Highams Park).—It is "Isle of Wight" disease. You might keep on with the spraying. The heat will cause the fanning; open the entrance full width. You might also pack the brood box up with one or two thicknesses of section. The old queen has evidently been superseded.

J. Knowles (Lancs.).—It is "Isle of Wight" disease. The spraying would not cause it. We cannot tell you more than was in our issues for May 27th and June 10th.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Tuesday, August 3rd, 1915.—Bridgnorth and District Bee-keepers' Association, held in connection with the Hampton Loade Horticultural Society. A good prize schedule, open to Shropshire, Staffordshire, and Worcestershire, as follows:—Class I., 6 Sections of Comb Honey, 1st prize, bronze medal of Shropshire B.K.A.; 2nd prize, 5s.; 3rd, 2s. 6d. Class II., 6 Jars Run or Extracted, any colour, 1s. each entry, 7s. 6d., 5s., 2s. 6d. Class III., Open Gift Class, 1 Jar, to be sold by Association, 7s. 6d., 5s., 2s. 6d. Class IV., Open Gift Class, 1 Section, to be given to wounded soldiers, entry free, 7s. 6d., 5s., 2s. 6d. There are nine Classes for Members of the Association. Schedules on application to J. S. Lawton, 77a, High-street, Bridgnorth. Honey to be addressed to J. S. Lawton, Hampton Loade Station, G.W.R. —**Entries close July 26th, 1915.**

Monday and Tuesday, August 16th and 17th, 1915, Cannock, Staffs.—Honey Show, in connection with the Horticultural Society's Show. Eight open classes. Schedules from J. Bird, F.R.H.S., Glenmay, Cannock.

ROYAL SHOW FUND.

	£	s.	d.
Amount already received ...	£27	2	6

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of. Queens, and bees that are reared, or imported, for sale are Trade Advertisements, and can only be accepted under trade terms.*

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at* 1d. *per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of* 3s. *per* ½*in., or* 5s. *per inch.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

EXCESS OF STOCK.—Two colonies and six nuclei (six frames) to sell; colonies, 40s.; nuclei, 20s.; early hybrid Banats, wonderfully gentle and prolific, guaranteed healthy; also three large Canadian feeders, 2s. 6d. each; and twelve bottle feeders, 1s. each.—"CHISWICK," "Bee Journal" Office, 23, Bedford-street, Strand, W.C.

W.B.C. HIVES FOR SALE, 6s. 6d. each, without legs, good condition, selling through bereavement.—MRS. OWEN, Risley, Bury St. Edmunds. v 51

1 CWT. good extracted 1915 honey, 56s., carriage forward; sample, 3d.; cash with order.—A. LEE, Eastleigh, Bideford, Devon. v 53

STRONG ten-frame stocks of English bees for sale, diseases never been known.—THOS. CORNEY, Ramsey St. Mary, Huntingdon. v 54

DRAWN OUT SHALLOW FRAMES for the heather, guaranteed healthy, 5s. dozen; 1lb. bottles splendid light honey, 10s. dozen, cash with order.—EDEN, postman, Chaddington, Oxon. v 50

FOR SALE, several stocks, on eight frames, 26s.; returnable boxes, 5s.; no disease; cash with order.—W. T. OWERS, 2, Barrington-road, Horsham. v 55

3 CWT. light extracted honey, in 28lbs. tins, 63s. per cwt.; tins free, and carriage paid.—C. H. BEER, Eardwell Manor, Bury St. Edmunds. v 56

FEW home-raised, healthy Italian queens, 1915, 4s. each.—H. JONES, Factory Brynkir, Garndolbenmaen, Carnarvonshire. v 58

QUEENS, 1915.—Two fertile, prolific Native Blacks, tested, 4s. each; guaranteed free from any disease.—CASTLOW, 72, Nicholson-street, Portrack-lane, Stockton-on-Tees, Durham. v 60

FOR SALE, very strong, healthy stock of bees, on eight frames, 30s.; swarms, on eight drawn out frames, 3s. 3d. per frame; box free.—AUSTIN, Staple Hill, Bristol. v 61

ITALIAN STOCKS.—Seven frames brood, queens 1915, from most prolific colony, heavy workers, guaranteed healthy, 35s.; also nuclei.—MISS PALING, Oreham Common, Henfield, Sussex. v 62

SEVERAL good eight frame stocks of bees, 23s. each; stamp.—WILSON, Apiary, Belper. v 63

QUEENS, 1915.—Several Black, Banat, and Italian, fertile, warranted prolific and free from all disease, 5s. each; prompt despatch.—F. W. HARPER, Lyndhurst, St. James's-road, Watford. v 47

FOR SALE, healthy swarms, in skeps, June 23rd and 28th, 16s. and 17s. 6d.—KEYTE, Gordon-road, Harborne, Birmingham. v 43

FIVE, six, seven-frame nuclei, brood in all frames, with young laying queens, 15s. to 17s. 6d.—BARNES, Bourdon-road, Anerley. v 45

TRICAR, Humber, water cooled, good running condition, £20; or exchange for bees and appliances.—WHITEHEAD, Eccleshill, Bradford. v 34

ITALIAN home-raised queens, fertile, 1915, from imported mothers, 5s. each.—OLIVER KNIGHT, Epney, Stonehouse, Glos. v 33

HAVING obtained larger one, will sell Green's 10in. lawn mower, 8 knives, and grass box, 25s., or offers, in excellent condition.—HERROD-HEMPSALL, Apiary, Luton, Beds.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

WILKES' free-way excluder and non-swarming method have resulted in enormous takes of honey; sample excluder, 2s.; illustrated work explaining prevention of swarming, with many photos, 1s. 1d.; send for 1915 catalogue, all post free.—WILKES, Four Oaks, Birmingham.

CHOICE PROLIFIC ENGLISH QUEENS, 1915, selected and tested, bred from non-swarming stocks, 5s. 6d. each; safe arrival guaranteed; 12th year.—ARTHUR H. WILKES, Four Oaks.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

1915 QUEENS, autumn re-queenings, nuclei, stocks, best British and foreign strains; stamp, particulars.—ATKINSON, Specialist Breeder, Fakenham. v 59

FIRST-CLASS IRISH HONEY.—Tenders are invited for the purchase of up to ten tons honey; sections graded in three classes; run honey in bulk or bottle.—Apply, SECRETARY, Kilkenny and District Bee-keepers' Society, Kilkenny. v 46

ITALIAN QUEENS, pure, fertile, 1915, reared by well-known breeder in France, 5s. 6d. each.—ELLIOTT, Kelvin-road, Ipswich. v 57

1915 SUPERIOR ITALIAN QUEENS, 5s. each; also nuclei.—A. TROWSE, 51, Eade-road, Norwich. v 52

NOW booking nuclei, ready third week July, 4-frames, 12s. 6d.; 6-frames, 16s. 6d.; full of brood, with selected young queen, White Star Italians by arrangement; choice 1915 queens ready for despatch, healthy; particulars, stamp.—CROWE, Stawell, Bridgwater. v 32

SECTION Glazing, lace paper strips, 7d. per 100; lace bands, 3in., 1s. 3d. per 100, post free; good section racks, slotted dividers, followen and wedge, complete, 1s. 6d., as new; also section racks, complete, 1s. 3d. each.—W. WOODLEY, Beedon, Newbury.

BRICE'S BRONZE MEDAL QUEENS (23rd season), special 7s. 6d., selected 5s. 6d., guaranteed.—BRICE'S APIARIES, Green-street Green, Orpington, Kent.

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d. post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 41

THE GELSTON CURE

For the Isle of Wight Bee Disease.

Highly recommended by M. T. Batten, who, in a letter to the *British Bee Journal*, November 12, 1914, stated: "I have had no further trouble since using the Gelston Cure." Mr. Davidson, Morpeth writing on April 20, 1915, for another bottle, says: "It has kept mine free since November."

Price 1s. 3d. and 2s. 6d. per bottle, post free, with instructions.

GELSTON & CO., The Pharmacy, Basingstoke

MEADOWS BEST BEE APPLIANCES
SYSTON near LEICESTER *Send for* **KAT-A-LOG**
Extractors, Honey Tins, Boxes, &c.

THE OWNERSHIP OF A SWARM.

The following particulars compiled from accounts in several papers will no doubt be interesting to our readers. The question as to the ownership of stray swarms often crops up. In this case the defendant evidently took the swarm from land in the occupation of the plaintiff and was, we think rightly, made to pay for them.

LAW FOR BEES.

Peculiar Case at Torquay.

Price of a Double Swarm.

Strange things appear in courts of law at times, and on Saturday at the Torquay County Court a man brought a number of honey-bees in two glass jars and some more in a match-box. He appeared to be desirous that another person should identify them, and certainly an expert would experience more than a little trouble in doing so. The Judge declined in any way to examine the sample. "I am afraid they will examine me," he added, with a laugh.

It appeared from the statements made that bees even have not escaped the attention of the Legislature. In the event of a hive swarming on a neighbour's land, the neighbour can hive them, provided that the owner does not follow. In that case the owner is permitted by law to go into another person's garden in order to undertake the somewhat delicate task of shaking them from a tree into a hive.

The action on Saturday was brought by Mr. John Mudge, who keeps a number of hives in another person's garden in Meadfoot Road, and he claimed the value of a double swarm from Mr. William Brooking, the amount being placed at £2.

Mr. E. Hutchings, for the plaintiff, stated that early in May Mudge went to examine his hives, and noticed that one of them must have swarmed. Defendant came up to him and said, "What will you give me if I tell you where your bees are?" A sum was mentioned, but this was declined. Subsequently, the plaintiff asked the defendant where the bees were, and Brooking would not tell. As a matter of fact, the bees were on the plaintiff's land, but the position was only known to the defendant. A lady in an adjoining garden, it was subsequently ascertained, had complained of the presence of the bees and spoke to the defendant about it, inquiring when he proposed to take them away. He told her that he should do so the following morning.

"Supposing I have a hive of bees swarm and they get on my neighbour's land?" queried the Judge.

Mr. Hutchings: The neighbour can take them and hive them, unless the owner follows and hives them first. But in this case the bees were taken from the plaintiff's land.

John Mudge said it was on May 13th that he had occasion to go to the hives, and then saw that a swarm had left one of the hives. Defendant was working in an adjoining garden, and he said, "I bet I know where they are." As witness walked up to the hive, defendant said, "What will you give me to tell you where they are?" Witness replied, "Half-a-crown," whereupon Brooking said, "Make it another tanner." Witness walked away. The next day he noticed footmarks on the hedge between the two gardens.

Defendant: Did I offer you a swarm of bees?

Witness: You offered to tell me where the swarm was.

The Judge: Did he know that you had lost your bees?

Witness: Yes.

Defendant: Can you swear to your bees if you saw them?

Witness: You asked me if I had my name on them, and I said "No." (Laughter.)

"Can you swear to the bees?" repeated Brooking.

His Honour: How can anyone swear to bees?

Defendant: I have samples here, and you can examine them.

"I would rather not. I am afraid they would examine me," returned the Judge, to the accompaniment of laughter. His Honour added that he thought Brooking had better be sworn and give evidence.

Defendant stated that he was having a pipe of tobacco after dinner, when he saw a swarm of bees approaching from the opposite direction to plaintiff's garden. He followed them. Knowing that plaintiff kept bees, Brooking thought he might as well have the swarm as anybody else.

The bees were on Mr. Finch's land.

The Judge: What did you do?

Defendant: I went to get a thing to cover them?

"I took them," he added.

His Honour: What time of day did you take them?—I don't know.

The Judge commented that Brooking seemed to time other incidents to the minute.

Defendant remarked that he covered the bees about quarter past one.

Couldn't you have told plaintiff where the bees were?—I offered to sell them to him.

Had you already taken them when you made that offer?—No; but I had covered them.

What time did you dine that particular day?—About a quarter to one.

What time after dinner did you have the interview with plaintiff?—At 2.58.

At that time you had not taken the swarm?—They were covered.

What do you mean by saying that you had taken them something after one o'clock?—I had taken them.

So that at two o'clock you had already taken the bees?—I had covered them, but not taken them away.

Where did you cover them?—In an apple tree in my employer's garden. I covered them with a dress-box.

How?—I shook them into the box, and turned the box upside down on the ground.

What did you do with the lid of the box?—There was no lid to the box.

By Mr. Hutchings: I saw plaintiff the same evening, but did not refuse to tell him where the bees were. Plaintiff said, "They are my bees; tell me where they are." With the same breath he added, "No, you won't." I did not tell him that I had covered the bees at half-past one.

Defendant emphatically denied having a conversation with Miss McClew about the bees.

Mr. Hutchings: Did you not tell her that they were your bees and that you would take them away in the morning?

Defendant: No.

Mr. Hutchings: Who did you sell the bees to?

Defendant: I may have given them away.

"Did you sell these bees to Mr. Frost?" further asked Mr. Hutchings, to which the reply was, "Mr. Frost has bought a swarm."

"Did you sell these bees to Mr. Frost?" again asked Mr. Hutchings.

"I did," replied the defendant.

Mr. Hutchings: Did you tell him where you got them?

Defendant: I did not.

Mr. Hutchings: Have you told anybody that you got them from the Lincombes, which is half-a-mile away?

The answer was in the negative.

Mr. Hutchings: Where did you say you got them from?

Defendant: I have not told anybody.

Mr. Hutchings: How much did you sell them for?

"Not £2," answered the witness.

"How much?" again asked the plaintiff's solicitor.

"One shilling," was the reply.

The Judge enquired how much a swarm of bees was worth.

Mr. Hutchings: From £1, your Honour; this was a double swarm.

Miss McClew said the bees were in an apple-tree in the garden and were causing considerable annoyance. She called through the hedge, making a request that Mr. Finch would come and take them away. She had a conversation with a man in the adjoining garden and he told her he would take them away the following morning, as they belonged to him.

By defendant: She did not see the man.

Answering Mr. Hutchings, defendant said no other man was in the garden at that time.

Mr. Clarke placed the value of a double swarm at £2.

Another expert, called by the defendant, said a good swarm did not cost more than 30s. It all depended on the weight.

Horace Frost stated that he bought a very small swarm from the defendant on June 3rd.

Plaintiff told witness that they were not his bees. He told plaintiff he could have the bees for 1s. 6d.

This statement was flatly denied by the plaintiff.

The Judge said, in summing up, that he believed the plaintiff's story as to the interview that took place, and also the evidence of the lady as to the bees being on plaintiff's land, and that the defendant removed them. That was the only inference that one could draw. He gave judgment for the plaintiff for 30s.

By "Nemo."

Bee's Flight to Pastures at a Higher Altitude.—The further experience with regard to the flight of bees of M. J. M. Gouttefangeas is related in *Revue Eclectique d'Apiculture*. In ascending to higher altitudes the writer says bees travel much further than is usually admitted. Mr. Cowan thinks they can rise to 400 yards, which is double the height admitted by M. Bourgeois, but even the former's estimate may be exceeded, as the examples adduced tend to show. M. Gouttefangeas says that on the mountains of Forez, at a short

distance from l'Hermitage, is the summit of Vimond (altitude 1,360 metres or 4,461 feet), covered with heather (*erica vulgaris*). There are hives lower down at an elevation of 7 to 800 metres (2,296 to 2,624 feet), distance 5 to 6 kilometres (about 3 to 3¾ miles) from the summit. The owners of the hives are satisfied that their bees visit the heather at Vimond, for they have powdered them with flour, which has enabled them to verify the fact. In any case the total absence of pasturage at the end of August, when heather blooms, is additional evidence that the harvest of nectar comes from the higher pastures, and that the bees ascend from 5 to 600 metres (1,640 to 1,968 feet) for the purpose of collecting it.

The writer gives another instance of his own experience. Towards the end of summer he made the ascent of Pierre-sur-Haute, one of the peaks of the Forez mountains (altitude 1,640 metres or 5,380 feet). It is an extensive piece of table-land, and there must be from 5,000 to 10,000 hectares (12,000 to 24,000 acres) of heather, with green patches of grass dotted about and flanked with huts and cow-houses. These are only occupied when the cows from all the neighbouring communes are driven to the Great Mountain for pasturage during the fine season. Thousands of cows find their food on these heights. Bees also go there to forage. When M. Gouttefangeas crossed these immense pastures, the heather was in full bloom, and he was astonished to find for miles and miles of road traversed not a single square metre of heather but what had from one to three bees foraging on it. They were just as plentiful right up to the very summit of the mountain. There had been no hives brought up to the pastures with the cattle, and the nearest villages were from 10 to 12 kilometres distant. In any case had a few hives been brought up it could not have accounted for the immense number of bees found, and the conviction come to was that the bees had come from a greater distance, and in reaching as far as the Cross of Pierre-sur-Haute on the summit had exceeded the limit generally allowed.

Another excursion enabled him to confirm this view. Opposite Pierre-sur-Haute, and separated by an extensive valley, is situated half way up the side of the mountain the village of La Renaudie, where there are large numbers of colonies kept in both skeps and frame hives. This is what the owners told M. Gouttefangeas: "Towards the end of August, when the heather on Pierre-sur-Haute is in flower, our bees take their flight in the direction of the Great Mountain; they start out from 6 to 7 o'clock in the morning, and the first do not return before 10 o'clock." These men are convinced that the bees do 8 to 10 kilometres (about 5 to 6 miles) in a straight line to get to their pasturage, and the same distance to return. There and back requires about two hours.

The conclusion arrived at is that contrary to their flying short distances to a lower altitude, owing to fear of not being able to rise when laden (see "B.B.J." for June 7th, page 204), they are capable of making a journey going and coming of 15 to 20 kilometres (about 9 to 12 miles), if the nature of the district requires it. Of course, such flights will depend on circumstances, such as temperature, locality, season, air currents, etc., and for this reason the writer recommends that the subject should be more closely studied.

Death of Cav. Andrea de Rauschenfels.—In the July number of *L'Apicoltore* we regret to see the announcement of the death of this veteran bee-kepeer, who only a couple of years ago relinquished his position as editor of that paper.

Cav. A. de Rauschenfels was born in 1828 at Lienz, in Austrian Tyrol, and received his education in the University of Innsbruck. After serving in the army from 1847, and going through the Battle of Novara, he retired in 1852 and settled in Italy. In 1869 he commenced bee-keeping with six colonies of bees, and in course of time had as many as 200 colonies. He was brought up in the German school of Dzierzon and Berlepsch, and for many years was in favour of the narrow vertical hives, but he latterly found that the horizontal hive was superior, and advocated in his writings that known as the Dadant hive. He contributed articles to the German papers and also to *L'Apicoltore*. He became editor of this paper in 1888, and ably conducted it for twenty-five years, only retiring in December, 1912, on reaching the age of eighty-five years. He advocated simplicity and economy, and believed that many of the appliances recommended were unnecessary and could be better done without. From 1871 to 1873 he contributed articles to the *Bolletino del Comizio Agrario di Parma*, and in 1878, in company with Cav. L. Sartori, he compiled a book entitled "L'Apicultura in Italia," and in 1901 he brought out "L'Ape e sua Coltivazione" and also "Compendio d'Apicultura." Although of so great an age Rauschenfels preserved his vigour to the last, and being extremely modest and benevolent he was much appreciated, and his loss will be greatly felt by all, and more especially by those who had the privilege of knowing him.

NOTTS. BEE-KEEPERS' ASSOCIATION.

HONEY JUDGING COMPETITION AT THE ROYAL SHOW.

I send herewith a few further particulars with regard to this matter, as we think they will prove both interesting and instructive. They are given for that purpose, and not, as so many feared would be the case, to show up the competitor. It will be quite obvious that no one can say or know who were right and who were wrong—beyond the published names of the winners—except the individual competitor. It is hoped that each will compare the duplicate of his efforts—which he retained—with the actual sources as published, which should in some measure educate him in the matter.

No. 1 was a sample of clover honey, with just a flavouring of lime sufficient to make its presence known.

Some of the competitors put this down to be from sycamore, fruit, lime, mustard, and apple wholly; whilst others considered it was from fruit and sycamore, fruit and charlock, fruit and clover, clover and sanfoin. Only one competitor gave its true source.

No. 2.—This was a sample of early honey gathered in the vale of Belvoir, near to Belvoir Castle, and was a fine sample of "mixed fruit honey."

It was variously ascribed to the maple, hawthorn, bean, sycamore, and heather. Five competitors named its true source.

No. 3 was as pure a sample of clover honey as is to be found generally. Twelve competitors were correct as to its source, three stated it was mixed with sanfoin, fruit, or raspberry, two that it was lime.

No. 4.—This was a sample of new honey gathered in the park at Nottingham, and was what is generally termed "Tree Honey" being obtained from apple hawthorn, sycamore, chestnut, and other melliferous trees. There was also a slight amount of honeydew in it, which was noticed by some of the competitors.

Although this had been extracted a fortnight before the show, and that at the time of the show the lime blossoms had not opened, no less than five competitors considered it was from that source. Three only were correct in their diagnosis.

No. 5.—Heather-blend. Dark in colour. Five competitors named this correctly; whilst some put it as wholly from the heather, others from sycamore and fruit, hawthorn, gooseberry, clover and bean, tree honey, blackberry, pine, and chestnut.

No. 6 was practically the same as No. 3, with the *faintest* trace of heather. Only one arrived at its true source, whilst eleven put it down as clover, one as lime, and others as clover and some other mixture.

No. 7.—Heather from both Calluna vulgaris, Erica cinerea, and a few other sources, a stronger heather mixture than No. 5. With one exception all attributed this to the heather, either wholly or partially, the one dissentient named it as lime.

No. 8 was a rather puzzling sample, which was obtained from Devonshire, and was chiefly from the clover, but there were a good few dandelion and other compositeæ which imparted a yellow colour to it. It was also partially granulated, and bore a faint trace of carbolic. Only one named its true source, the others considered it from lime, dandelion and mustard, sycamore, apple, sanfoin, buckwheat, hawthorn, etc.

In the matter of judging the honeys for position the analysis is as follows:—

For 1st place:

13 for No. 3
6 for No. 6
1 for No. 8

For 2nd place:

6 for No. 6
5 for No. 1
3 for No. 3
2 for No. 4
1 for No. 5
3 for No. 8

For 3rd place:

6 for No. 1
6 for No. 6
2 for No. 2
2 for No. 3
3 for No. 4
1 for No. 7

There appears to be no doubt as to placing No. 3 for first, but it was between 6 and 1 which should take second and third place.

The awards to each sample of honey were as follows:—

13 place No. 3 first.
3 place No. 3 second.
2 place No. 3 third.

6 place No. 6 second.
6 place No. 6 first.
6 place No. 6 third.

6 place No. 1 third.
5 place No. 1 second.

1 gives first prize to No. 8.
3 others second prize to No. 8.

2 give second prize to No. 4.
3 others place it third.

2 put third prize to No. 2.
1 puts third prize to No. 7 (heather).

—Geo. Hayes.

DERBYSHIRE NOTES.

Congratulations first of all to our local exhibitor, Mr. Pearman, who, by his success in winning the gold medal at "The Royal," has not only brought honour to himself but has successfully demonstrated, not for the first time, the superlative excellence of Derbyshire honey.

When last I contributed a few notes I was congratulating myself upon the exceptionally early season and the good prospects of a record honey harvest. I am sorry to say that these prospects have not matured into realities. The very warm weather of early June burnt up all the ground crops and dried up the ground so that very little clover could show itself. When rain came the weather never again picked up, and very little honey has since been gathered. In fact, I have had to feed nuclei to prevent total starvation, and that with plenty of clover in the fields and limes coming into bloom. There may still be a short flow of honey if the weather will only mend, but I am afraid that any gathered now will be tainted with honey dew. In spite of frequent and copious washings of rain the excrement of aphides is still thick upon the leaves of limes, beeches, and oaks, and that is almost sure to mean "tainted honey."

But "hope," the poet tells us, "springs eternal in the human breast," and now my thoughts turn towards the heather, and I am already revelling in anticipation of another record harvest. Of course, I may be disappointed; I am almost certain to be disappointed; it is ever so. But that lessens none the less the joys of anticipation. It will not be my fault if that harvest is not a success. Once again I will set out what I consider to be the essentials to such a success. First see that none but strong stocks, full of bees and brood are taken, and that there is a vigorous young queen at the head of each stock. If, when the time for the heather comes, stocks are not in that condition they must be made up to it. Secondly, see to it that the supers, whether sections or shallow bars, contain drawn-out comb; bees will store in them when they will not look at foundation. Be certain that all hives shut up securely and pack easily on the dray, and, if you are not an expert horseman, look after the bees yourself, but leave the horsemanship to a properly qualified carter. The latter point makes for ease and peace of mind.

If it happens to be your first journey to the moors you will find that you know much more about bees and bee-keeping after the journey than you did before.

Like "Dartmooriensis" I also noticed the editorial reply to the query on "unsealed brood." I came across a similar case in my little bit of expert work this spring. There was no wax moth in the hive, nor had it been over drugged. I diagnosed it as a form of foul-brood, and judged that "Apicure" would be a good thing. This was tried and a cure resulted. This point now arises, "Are we to be troubled with another disease?"

Perhaps other more capable and experienced bee-keepers have also seen this phenomenon, and will report upon it.

One more thought. In his "Blurts" Mr. Smallwood speaks of the varying temper of bees. This is often inexplicable, I never knew bees worse than they were in July, 1914, during the hot weather. Ordinarily my bees are quite mild, and I can handle them with little or no protection, but at that time I began to think that to be a bee-keeper one would have to invest in a suit of plate armour. They quietened down again just as remarkably later on. On inquiry I found that most bee-keepers in this district had the same experience at that time. Hybrid stocks were unapproachable. Whilst just looking into the supers of such a stock for a friend I was assailed by the bees with such fury that I had to beat a retreat, and acknowledge for that time, at least, an ignominous defeat. I have often had bees crawl up my legs when they have first settled on my boots, but these were more than crawlers. They flew, as though they knew the way under the bottom of my nether garments, and I had quite a busy time later picking out stings from the calves of my legs.—D. WILSON.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

SITTING OR STANDING.

[9161]—A short time ago Mr. Macdonald gave his views—or some of them—on sitting when examining a hive, and asks for those of your readers.

So far no one except Mr. Crawshaw has come forward with any, so perhaps you will allow me to air mine.

I am quite in agreement with "D.M.M." that sitting is not an ideal position for manipulating. There is, as he says, "a lack of freedom of movement," etc., but *I* have no doubt as to a long fatiguing day being lightened by sitting occasionally—and I speak from experience. Surely "D.M.M.'s" assertion that if he saw anyone sitting when dealing with bees he would put it down to laziness, is, to say the least of it, a little too sweeping. So far as America is concerned the hives are, as Mr. Crawshaw points out, lower than ours; but there is another factor that neither he or "D.M.M." seem to have taken into account, and that is the height of the operator. Now I do not know the height of either of these contributors, but I do know that my own is only a fraction of an inch below 6 feet, and that to bend over hives only about 18 inches high for an hour or two at a stretch is extremely trying for my back. I have more than once been glad to sit down or drop on one knee for ease. A comfortable height for me is to lift one brood-chamber on the top of another (but this is not often practicable), and, therefore, I should judge that the usual height of a hive would be right for anyone who was short of stature; and I have met bee-keepers—good ones, too—who would have to stand on a box to handle frames in supers that were only just a comfortable height for me when standing upright. I am all right for picking apples, but bending over an 18in. high brood box is another thing altogether.

To sum up, therefore, I should say that, speaking generally, a standing position is the best, but that for ease occasionally, sitting is permissible, and should not lay one open to the charge of laziness.—X.

SKEPS VERSUS FRAME HIVES.

[9162] I am glad that Mr. Crawshaw has been able to find something nice to tell us of the skep (page 235), also that he is at last willing to compare the two systems, as only by this method can we hope to secure what is best for the industry as a whole. I don't quite see why he should ignore the "takings" from the swarms, or rather lump them on to the original three. Reckoning in this manner my results from one hive would read, increase 400 per cent. cash for bees, £1 15s. extra honey from original stock, 97lbs. Of course I must consider labour and expense, but this is balanced very well by increased worth of stock, the whole accomplished at no loss of insect life—or, perhaps, I should say very small loss.

It might be advisable to find just where we stand now, with regard to the discussion. As an agitator for compulsory examination, and mobility of hive interiors, on the ground that it is better for the craft as a whole, I think we can get out of the difficulty very nicely by a time limit, and then those that are not capable or willing must fall out. I don't see why the whole industry should be kept back for the sake of a few one season successes. With compulsion would come, I think, a better and more useful education, if more expensive it is wanted; I think we have run along on voluntary effort long enough, although I hope we should be none the less grateful to the very few prominent gentlemen who have given so much time and money to further bee-keeping in this country.

A. H. Hamshar.

AN APPEAL FOR A CYCLE.

[9163] *Re* my appeal in your issue of July 1st, for a kind donor of a lady's cycle to help a poor Belgian refugee in the doing of her work. The appeal, I am sorry to say, met with no response, for the reason, I expect, that several readers would like to have given, but thought someone else had written before them. I can assure any intending donor that I want but one cycle, and in the event of more than one being offered, I should take the first and suitably acknowledge the others. May I again appeal to some "Bee-keeper's" generosity, as I feel it would add materially to the already existing ties which link us to the Belgians, whose countrymen have done so much to enrich the world in the lore, knowledge, and culture of the "Honey Bee."—R. Litman, Castle Carey, Somerset.

CURING "ISLE OF WIGHT" DISEASE.

[9164] The bees I sent you in the winter were from various stocks all dying from "Isle of Wight" disease. I am now able to say that those stocks have survived, and are going strong. I am also using the hives again after washing them out with boiling water and chloride of lime. At the latter end of March a gentleman saw the hives and said: "I don't wish to dishearten you, but you will lose them all very shortly." I was at that time treating the only stock a friend had left after losing seven,

although he had taken the usual precautions and had used disinfectants, etc. That stock and others are now doing well. I re-queened it, and after it had swarmed made it into two. The gentleman mentioned is well known here as a bee-keeper, and I may say he is agreeably surprised at my results. After losing all his stocks he is having one of mine. I will do my best for any bee-keepers round here who wish to save their bees if they will pay just my out-of-pocket expenses. I will do this because I feel convinced I have found a remedy, and I think anyone will agree it is the best way to convince others. I was afraid to have more than two stocks, as I cannot afford great risks, but my success has encouraged me to increase to six. I could tell a long tale of my experiences and experiments, the above is just a brief sketch.—A. TROWSE, 57, Eade Road, Norwich.

[Perhaps some bee-keepers in the district may like to avail themselves of the offer made by Mr. Trowse. If they do we shall be pleased to hear the results. In a foot-note Mr. Trowse says he does not guarantee a cure in every case, but "I wish to give my cure a full trial free, except for out-of-pocket expenses. Should it prove effectual after a good trial I can then conscientiously advertise it.—EDS.]

IZAL AND "ISLE OF WIGHT" DISEASE.

[9165] I desire to thank the Rev. Hubert Newman (9142) for advice on curing "I.O.W." with Izal, which I have tried with good results. I had lost twenty stocks when I tried Izal with my remaining three stocks, which were very badly affected; heaps of bees crawling and dying, and had no hope of them recovering. I commenced using Izal, and used it daily, morning and evening. The bees are now in very good condition, due solely to the use of this disinfectant, hoping other bee-keepers will give this a fair, honest trial.—J. ARCHER.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of June was £15,356. From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office H.M. Customs.

BEES IN FARMHOUSE WALLS.

Three colonies of bees having established themselves in the walls of Standalone farmhouse, near Letchworth, and become troublesome to the occupier, Mr. Ingrey, the latter called in Mr. L. Chapman, the bee expert, of Walkern, who was successful in taking the three colonies of bees and transferring them to his bar-framed hives at Walkern. He also took from the walls of the house upwards of 112 pounds of beautiful run honey.

A VAGRANT.

The humble bee,
No skep has he.
No twisted, straw-thatched dome,
A ferny crest
Provides his nest,
The mowing-grass his home.

The crook-beaked shrike
His back may spike
And pierce him with a thorn;
The humble bee
A tramp is he,
And there is none to mourn.

O'er bank and brook,
In wooded nook,
He wanders at his whim;
Lives as he can,
Owes naught to man,
And man owes naught to him.

No hive receives
The sweets he gives,
No flowers for him are sown;
Yet wild and gay,
He hums his way,
A nomad on his own.

—*Punch*, June, 1914.

[We question the accuracy of the last line of the third verse.—EDS.]

INTENSIVE FARMING.

They used to have a farming rule,
Of forty acres and a mule.

Results were won by later men,
With forty square feet and a hen.

And nowadays success we see
With forty inches and a bee.

—EX., from *Gleanings*.

ROYAL LANCS. AGRICULTURAL SOCIETY.

This society is running its annual show this year at Blackburn from July 29th to August 2nd. Owing to the absolute necessity of economy they are unfortunately obliged to drop the honey classes. They have, however, decided to have lectures and demonstrations in the bee tent, the lecturer being Mr. J. Herrod-Hempsall, of Luton, who for several years toured the county as expert. We understand the R.L.A.S. are spending a good deal of money and energy in providing hospital accommodation for wounded soldiers.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

UNITING DRIVEN BEES.

[9015] I have both black and Italian bees, the former have behaved very well this year, yielding honey very early and swarming once, or at most twice. The Italians have yielded very little so far, and have swarmed themselves silly! All their swarms were small ones, and I united them in couples in the new hives. Even so, I have four lots in boxes, and one in a skep. These I meant to return to the parent hives after a few days, but in the meantime other swarms having come out I thought it useless to do so. I should like to unite the bees in boxes with the orginal hives, but don't suppose I could first shake them out as in the case of their having been only a few days in box. Boxes and skep are well filled with comb. How should I proceed?

I have one Carniolan lot. After four swarms had gone I united a large swarm of blacks in middle of June. They all made friends at once, have worked well, and have not swarmed any more.—(Mrs.) E. KINGSCOTE.

REPLY.—Drive the bees into a skep or box in the usual way. If you wish to unite two or more lots of driven bees, fasten the skep containing the first driven lot in position and drive the next lot into it; the excitement of driving will cause the bees to unite without any further precaution, such as flouring. Take out of the hives to which the driven bees are to be united four combs, shaking all the bees off. Place them in a hive or box close by the hive from which they were taken, and run the driven bees on to the empty combs. In three or four days unite in the usual way by flouring both lots, and placing the combs of driven bees alternately between the others. Before uniting remove the worst queen, and it is safer to cage the one left for twenty-four hours.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

P. P. (Milford).—*Earwigs in Hives.*—Probably the best plan to clear them out would be to transfer the bees into a clean hive, and sprinkle powdered Naphthaline plentifully between the outer case and brood box, among the quilts and under the lugs of the frames.

R. LITMAN.—*Vinegar Making.*—(1) We do not use any chemical at all beyond a teaspoonful of Cream of Tartar to each gallon. (2) It should not be stirred. (3) You cannot remove it as it is dissolved. The vinegar will go on all right at that temperature.

MISS J. B. D. (Quainton).—We are sorry to say the bees are suffering from "Isle of Wight" disease. They are natives.

You will probably find a dose of Sal Volatile effective in the case of stings having a bad effect. Better consult a doctor, as it may be due to some peculiarity of constitution. An alkali such as soda or ammonia will be better than oil. Have you tried onion juice?

The price obtained for honey generally depends on the quality

of the honey and the business ability of the producer. It is an exception to make 1s. 6d. per section retail, except for heather honey, this will make 12s. per doz. wholesale. The average retail price for honey from clover, etc., is 1s., and first-class shops may charge 1s. 2d. to 1s. 3d. We cannot tell you where to get the driven bees; watch our prepaid advertisement column.

Bees will rest on the ground when returning home laden and tired from a long foraging expedition. The syringing will not harm the bees if it is not done when the trees are in bloom.

You may build up an apiary considerably by means of driven bees, the only difficulty in these days of "Isle of Wight" disease being to get them from a healthy district. Get as many standard combs as possible drawn out during the summer on which to hive them. We always found driven bees obtained and well fed up early in the autumn do extremely well the following year.

The nearest Association will be the St. Albans and District: Secretary, Mr. E. Watson, 26, Holywell Hill, St. Albans.

INQUIRER (Edmonton).—The sugar appears to be cane so far as we can judge. It will be suitable for winter feeding.

"DILION" (Bargoed).—The substance is heather honey gathered last year. It cannot be extracted in the usual way, but has to be squeezed out.

Honey Samples.

H. EGGAR (Chard).—We are unable to tell you why the honey has the peculiar aroma and flavour; the wood of the section rack would not cause it. The bees may have gathered it from some source you have not noticed. A microscopic examination reveals no trace of pollen grains from willow, apple, or pine. We may be able to give you further information next week.

Suspected Disease.

T. M. B. (Clay Cross), P. W. D. (Beeston), NORRIS (Lincs.), E. C. H. (Lancs.).—The bees are suffering from "Isle of Wight" disease.

REX (Lincs.).—It is "Isle of Wight" disease. Your best plan is to burn them and disinfect the hive. The remedy you mention may act as a preventive.

C. S. O. (Leeds).—It is "Isle of Wight" disease. Better destroy them. Syringe fronts and alighting board of the other hives with Izal and water. Lime the ground with quicklime, and, if possible, dig it over. For other precautions see our issues for May 27th and June 10th.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Tuesday, August 3rd, 1915.—Bridgnorth and District Bee-keepers' Association, held in connection with the Hampton Loade Horticultural Society. A good prize schedule, open to Shropshire, Staffordshire, and Worcestershire, as follows:—Class I., 6 Sections of Comb Honey, 1st prize, bronze medal of Shropshire B.K.A.; 2nd prize, 5s.; 3rd, 2s. 6d. Class II., 6 Jars Run or Extracted, any colour, 1s. each entry, 7s. 6d., 5s., 2s. 6d. Class III., Open Gift Class, 1 Jar, to be sold by Association, 7s. 6d., 5s., 2s. 6d. Class IV., Open Gift Class, 1 Section, to be given to wounded soldiers, entry free, 7s. 6d., 5s., 2s. 6d. There are nine Classes for Members of the Association. Schedules on application to J. S. Lawton, 77a, High-street, Bridgnorth. Honey to be addressed to J. S. Lawton, Hampton Loade Station, G.W.R. —**Entries close July 26th, 1915.**

Monday and Tuesday, August 16th and 17th, 1915, at Cannock, Staffs.—Honey Show, in connection with the Horticultural Society's Show. Eight open classes. Schedules from J. Bird, F.R.H.S., Glenmay, Cannock.—**Entries close Tuesday, August 10th.**

August 5th, at Madresfield, Malvern.—Annual Show of the Worcestershire B.K.A. Prizes, £10, and Challenge Cup. Four open classes. Entry fees, 1s. for first entry; further entries, 6d. each. Schedules from George Richings, 2, Shrubbery-terrace, Worcester. **Entries close August 2nd.**

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of. Queens, and bees that are reared, or imported, for sale are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the 'Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

ADVERTISER requires 3 cwt. light-coloured new English honey, superior quality; also 150 new, well-filled, clean sections.—Apply first instance, Box X., "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 74

DUTCH VIRGINS, 2s. 6d.; mated, 5s. 6d.; on 4-frame nucleus, 17s. 6d.; resistant, prolific; hybrids, same price.—PAUL, Salisbury-road, Bexley. v 79

W.B.C. HIVES, good condition, 6s. 6d. each; selling through bereavement.—MRS. OWEN, Risby, Bury St. Edmunds. v 78

WANTED, on hire, an extractor for brood combs.—MRS. OWEN, Risby, Bury St. Edmunds. v 77

HONEY EXTRACTOR WANTED, must be in good working order.—J. WESLEY, 102, Parrin-lane, Monton, Eccles. v 76

FOR SALE, extra strong 8-frame stock of bees, 30s.; swarms on 6 or 8 frames, at 3s. 3d. per frame; box free.—F. AUSTIN, Staple Hill, Bristol. v 75

HONEY, 1915, finest quality, 1lb. screw-top jars, 7s. 6d. dozen; also 14lb. tins, 7s. tin.—TAYLOR, Schoolhouse, New Leake, Boston. v 73

GUARANTEED strong, healthy, established swarms, 8 frames, £1; honey, 16s. 6d. per 28lbs; 9s. 6d. per dozen bottles.—RALPH, Llandyssil, Montgomery. v 72

COME and see seven splendid W.B.C. hives, crowded with pure Italian bees, and 3 cwt. this season's honey, all on sale owing to motor accident.—JONES, Stoney Fell, Rhyl. v 71

DUTCH QUEENS.—Seven very prolific, from imported mother, immune from disease, 5s. each.—K. POLAND, Greenlands, Caterham. v 70

WILL any Scotch bee-keeper supply another with ½ cwt. of honey; state price.—Box 30, "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 69

ADVERTISER wants to work on apiary for fortnight, August or September, to gain experience in bee-keeping.—D. TAYLOR, Meadowhead, Whitecairns, Aberdeen. v 68

SMALL APIARY FOR SALE; owner removing to town.—Seventeen strong, healthy stocks, on 10 and 12 frames; two May casts, on 7 frames, all in good, well made hives, 25s. to 30s.; casts, 20s.; also extractor, good as new, 17s. 6d.—"REMOVER," "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 67

WANTED, W.B.C. hive; also bees, healthy; exchange pigeons.—P. PAVER, South Milford. v 65

COMB HONEY, clean, white, well filled, early honey sections.—BLANKLEY, Honey Cottage, Denton, Grantham. v 64

EXCESS OF STOCK.—Two colonies and six nuclei (six frames) to sell; colonies, 40s.; nuclei, 20s.; early hybrid Banats, wonderfully gentle and prolific, guaranteed healthy; also three large Canadian feeders, 2s. 6d. each; and twelve bottle feeders, 1s. each; twenty Porter escapes, 1s. 9d.—"CHISWICK," "Bee Journal" Office, 23, Bedford-street, Strand, W.C.

HAVING obtained larger one, will sell Green's 10in. lawn mower, 8 knives, and grass box, in excellent condition, 25s., or offers.—HERROD-HEMPSALL, Apiary, Luton, Beds.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

STRONG ten-frame stocks of English bees for sale, diseases never been known.—THOS. CORNEY, Ramsey St. Mary, Huntingdon. v 54

FIVE, six, seven-frame nuclei, brood in all frames, with young laying queens, 15s. to 17s. 6d.—BARNES, Bourdon-road, Anerley. v 45

ITALIAN home-raised queens, fertile, 1915, from imported mothers, 5s. each.—OLIVER KNIGHT, Epney, Stonehouse, Glos. v 33

FOR SALE, zinc skep covers, 1s. 3d. each; also shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

WILKES' free-way excluder and non-swarming method have resulted in enormous takes of honey; sample excluder, 2s.; illustrated work explaining prevention of swarming, with many photos, 1s. 1d.; send for 1915 catalogue, all post free.—WILKES, Four Oaks, Birmingham.

CHOICE PROLIFIC ENGLISH QUEENS, 1915, selected and tested, bred from non-swarming stocks, 5s. 6d. each; safe arrival guaranteed; 12th year.—ARTHUR H. WILKES, Four Oaks.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

1915 QUEENS, autumn re-queenings, nuclei, stocks, best British and foreign strains; stamp, particulars.—ATKINSON, Specialist Breeder, Fakenham. v 59

FIRST-CLASS IRISH HONEY.—Tenders are invited for the purchase of up to ten tons honey; sections graded in three classes; run honey in bulk or bottle.—Apply, SECRETARY, Kilkenny and District Bee-keepers' Society, Kilkenny. v 46

ITALIAN QUEENS, pure, fertile, 1915, reared by well-known breeder in France, 5s. 6d. each.—ELLIOTT, Kelvin-road, Ipswich. v 57

HEALTHY driven bees, with queen, commencing August 2nd, 5s. per lot; boxes returnable; orders in rotation; cash with order.—T. PULLEN, Ramsbury, Hungerford. v 66

SECTION Glazing, lace paper strips, 7d. per 100; lace bands, 3in., 1s. 3d. per 100, post free; good section racks, slotted dividers, followen and wedge, complete, 1s. 6d., as new; also section racks, complete, 1s. 3d. each.—W. WOODLEY, Beedon, Newbury.

BRICE'S BRONZE MEDAL QUEENS (23rd season), special 7s. 6d., selected 5s. 6d., guaranteed.—BRICE'S APIARIES, Green-street Green, Orpington, Kent.

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d. post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 41

MEADOWS BEST BEE APPLIANCES
SYSTON near LEICESTER *Send for* **KAT-A-LOG** Extractors, Honey Tins, Boxes, &c

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

VISIT TO ZOOLOGICAL GARDENS.

July 17th, 1915.

The members of the Crayford Bee-keepers' Association, who were joined by the Rev. F. S. F. Jannings, F.E.S., and Messrs. C. L. M. Eales and J. Smallwood, were exceedingly unfortunate in their choice of Saturday last for their excursion to the apiary established at the Zoological Gardens by the British Bee-keepers' Association. However, notwithstanding a wet day, quite a number of enthusiasts turned up, who were amply rewarded for their courage by a most instructive lecture by Mr. W. Herrod Hempsall, F.E.S., secretary and lecturer to the B.B.K.A., on "Artificial Increase," *i.e.*, methods of increasing the number of colonies in one's apiary by artificial means.

This subject was suggested by Mr. G. W. Judge, who stated that the question of increasing the bee population was a vital one in many districts, and especially so to the Crayford Association, who had already established an apiary, on a co-operative basis, for breeding purposes for the benefit of their members.

The lecturer invited a full discussion on his remarks, and judging from the number of questions asked, his audience were keenly alive to the benefits to be obtained from selective breeding. A strain possessing first-rate honey gathering qualities, combined with a natural immunity from disease, should be bred from to the umost limit.

In conclusion, Mr. V. E. Shaw proposed a vote of thanks to the lecturer, after which an adjournment was made for tea.

The next meeting will take place at Maypole House, Dartford Heath, at the end of August, when it is hoped to hold an exhibition of honey, together with certain other attractions, which cannot fail to be of much interest to bee-keepers. Any of our readers who are interested should apply to the Assistant Secretary, Mr. G. W. Judge, "Barrowdene," Shepherd's Lane, Dartford, for particulars.

(*Communicated.*)

ESSAY WRITING ON BEE-KEEPING.

AN INTERESTING EXPERIMENT.

It will be of interest to all concerned in the welfare of local associations to learn of the experience of the St. Albans and District B.K.A. in relation to a novel experiment successfully carried out by them this year.

Looking about for the handiest, and most effective, and, at the same time, a novel method of generating interest, and spreading the knowledge of bee-keeping among those most likely to benefit by it, the happy thought occurred of offering prizes for essays on the subject to students of elementary schools. The committee agreed, and a circular was issued to the schoolmasters and schoolmistresses in the district, a list of whom was kindly supplied by the local secretary of the National Union of Teachers. The essay was to be entitled "The Honey Bee and its Home," and was not to exceed 200 words in length. A special prize of a gunmetal watch, accompanied by a certificate, was offered for the best essay submitted. Twelve first prizes of books, twelve second prizes of books, and twelve certificates were offered for those next in order. The circular requested the schoolmasters and mistresses to bring the matter to the notice of their pupils, and, if possible, to give them a lesson or two on the subject.

The response was immediate and highly satisfactory. Notwithstanding somewhat short notice, a very large number of essays reached the Hon. Secretary by the prescribed date, and a Board of Examiners was formed from members of the committee. The examination was found to be no light task, and after the disposal of those essays which had disregarded the rules, or wandered from the subject, or were otherwise hopeless, forty-nine were found to be of considerable merit.

For the special prize, the examiners found themselves unable to decide between two of the essays, and an appeal was made to the junior editor of the BRITISH BEE JOURNAL, who kindly consented to adjudicate, and awarded premier honours to Nellie Dewhurst, of St. Albans.

The examiners duly awarded the twelve first and twelve second prizes, and recommended that twenty-four certificates be given, that number of essays containing the necessary merit.

It is pleasing to record that very many of the essays showed signs of careful study of the subject, and even of observation, while the bulk of them bore ample evidence of intelligent endeavour. The essays were generally written clearly in unassailable English. This reflects great

credit on the teaching given in our county schools. As may be imagined with such a subject, a few "howlers" occurred, which went a good way to brighten the task of the examiners.

With the success of the experiment in mind it seems likely this Association will repeat it in future years. There appears no better way to bring the knowledge of modern bee-keeping into country homes and villages, and it is to be hoped these children may become good, careful, and prosperous bee-keepers.—F. JONES, Drayton Road, Boreham Wood.

OBITUARY OF A EUCALYPTUS FOREST.

HOW LONDON STREETS CAUSED A VALUABLE AND WONDERFUL HONEY FLOW TO ALMOST DISAPPEAR.

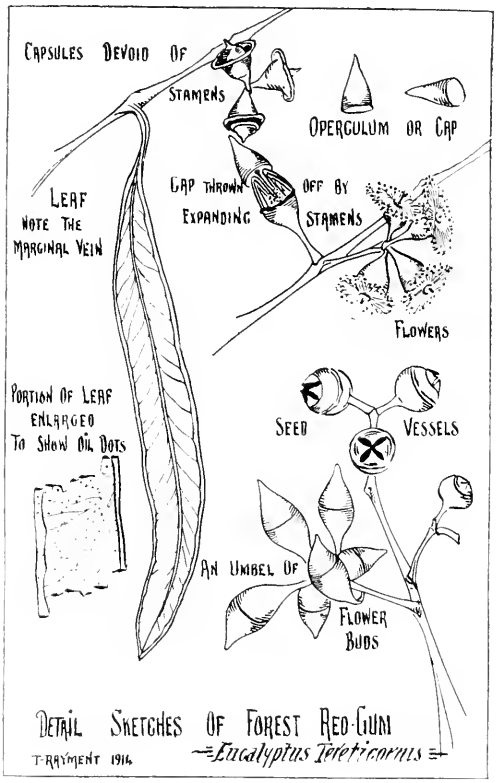
In the beginning London citizens complained of bad streets, and many methods of road construction were exhaustively tested.

Wooden paving blocks were laid down, and after trial were proved durable and efficient. Few Londoners have not at one time or another been inconvenienced by the action of the authorities closing a roadway while tarred wooden blocks from the Antipodes were disposed on a bed of concrete. These wood cubes are generally coated with a preservative at the municipal depôt, hence comparatively few people see them as they are unloaded from the ship's slings. Fewer still are aware that the brick-like pieces of wood were sawn in a mighty forest in far off Australia.

Before your readers take me to task for straying from the subject of bees and honey, let me digress to describe the province of Gippsland, in Victoria. This fertile area comprises the mountainous south-eastern portion of the State, and has for its northern boundary the long Australian Alps.

Away south, the ninety mile beach attunes the roaring surge of the southern ocean.

It was continuous forest—of various species of Eucalypts—from the sea coast to the purply-blue hills, and covered many hundreds of miles.



Nearer the coast the rainfall is consistent, and the dense—almost impenetrable—"bush" with its dank gloom sends the saplings up, up, up to the light a hundred feet; aye, two hundred feet and straight—perhaps an inch or two taper

from butt to top. These saplings develop into marvellous forest giants. [1,800 10ft. fence rails have been *split* from one of them.] But the "goodness" of these trees goes into wood, so they produce but little foliage and less honey.

Up north the mountain chain—snow covered for portions of the year—rolls from deep gully to lofty spur in endless complexity. Above the snow line the twisted Snow-Gums (*E. Alpina*) crown the stormy summit. In the fertile soil

Typical Eucalyptus Tree. Forest Red Gum. (*E. Tereticornis*).

of the gullies the Victorian Spotted Gum (*E. goniocalyx*), the White Gum (*E. pauciflora*), Messmate (*E. obliqua*), and Cider Gum (*E. Gunnii*), rear their tall white columns skywards.

The soft rich soil of the alluvial creek flats nourishes the Manna Gum (*E. viminalis*), Apple box (*E. Stuartiana*), and Silver-top Gum (*E. Sieberiana*).

On the steep granite spurs—one of the few spots in the world where the red Devonian Rock is also found—the honey-scented Yellow box (*E. melliodora*), the many flowered Red box (*E. polyanthemos*), the wonderfully hard Red Iron-bark (*E. siderophloia*) so sought after for railway sleepers, and various members of the Stringy bark (*E. eugenioides*) flourish and yield rich honey harvests to the enterprising apiarists snuggled away in the bewildering hills.

But the reddish wooden blocks did not come from the coast or the hills but half way between. This was a rolling plain, clothed with a delightful open forest of trees a thousand and more years old. The early settler, with lumbering bullock-waggon, travelled uninterruptedly over the grassy forest floor, just as it were a great natural park of shady Gum trees quite free of entangling undergrowth.

Here was the favourite camping ground

of the "blacks" or aboriginals, native game, *e.g.*, the Kangaroo, 'possum Emu, and Paddymelon abounded, and a canoe could be fashioned from a single leaf-shaped strip—the essential and final shape was cut direct from the tree trunk—of thick soft bark from the bole of the Forest Red Gum.* [In the water-colour sketch—of a typical specimen—the seedling on the left is of the Yellow box species, easily distinguished by the greyish-blue foliage, akin in colour to that of a carnation leaf. In the background is "scrub," or a thicket of young Eucalypts.]

The pioneers soon discovered the prodigious wealth gathered by the bees, and stored cavities in the great trees. [Sometimes 8ft. long strips of white honeycomb were secured from these wild nests.] In fact the old inhabitants lived on wild honey and potatoes long before meat was obtainable.

It was astonishing how difficult the inlocked grain of the Red Gum was to chop, the beefy-coloured wood nipped half moons out of the axe's edge, and the timber acquired a reputation for hardness. The chips on the ground were never attacked by white ants or termites, and someone found that this timber remained sound after 50 years' burial in the ground.

Then a saw mill came, and long teams of bullocks sweated as they hauled the forest monarchs to its hungry maw. For 30 years on one site, by day and by night, the singing steel disc bit off the ruddy cubes to pave ways for the heart of the Empire.

The denudation of the forest went on apace, and bees no longer traversed the plains seeking the thick ripe honey and creamy pollen of the Forest Red Gum. The days of November are now sterile, and apiarists no longer harvest the great yield—up to 10 tons were once stored by 160 colonies within a period of six weeks. From where this is written the eye travels down over the myriad stumps that dot the plain, the remnants of the once majestic forest.

Contributed by Tarlton - Rayment, "Queenlea" Apiaries, Bow Worrung State Forest, Gippsland, Vic., Aus.

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*This timber is valued in Australia for heavy dray wheel felloes and railway sleepers, or any work below ground. As some of your readers are probably aware, the botanical classification of the Eucalypts is most confusing, so that the Victorian Forest Red Gum is known in N.S. Wales as "Blue" Gum, and in Queensland as "Flooded" Gum. I have given many similar instances in my book—"Australian Bee-Farming and Native Honey Plants"—now in the publisher's hands. This is also the first attempt to compile a reliable list of the nectariferous plants. —T. R.

EXTRACTS FROM AN EXPERT'S DIARY.

By J. Herrod-Hempsall.

No matter how little people may know about bees, on one thing they have no doubt—bees have stings. It is the fear of this little weapon which probably prevents those who have a predilection for "lifting" their neighbours' property bestowing their attentions on bee-hives, although these are left out, an easy prey one would think to anyone who would like to help themselves to a feast of honey. Bee-keepers do occasionally suffer loss from thieves, but it does not often occur, and sometimes hives have been upset out of pure spite. I was told of one case of the latter just outside a small town in Essex, where one morning about a dozen hives were found pulled to pieces and the various parts scattered about. Mr. Dutton, at Terling, had a comb or two stolen from some of his hives on one occasion. On examining a hive one morning he found the combs disarranged, and as he is a careful bee-keeper he was somewhat suspicious that the hive had been interfered with. However, he thought he might possibly have left it in that condition, but a little further along, in another hive, other combs were disarranged, and one was missing. This confirmed his suspicions and the police were notified. A constable came, and after a search a comb was found thrown on one side, after a piece containing honey had been cut out. Suspicion fell on some men who were with a threshing machine at a farm not far away, and thither the police constable and Mr. Dutton went to make enquiries. One man had been sleeping in the barn, and on searching it for clues the police constable noticed a drop of some liquid on a bag or tarpaulin; he put his finger in the liquid, then tasted it, and remarked, "It's honey, right enough." The man was arrested, and, if my memory serves me, confessed to taking the honey, and was sentenced to a term of imprisonment. I have always marvelled at the pluck of that constable. I think I should have failed to prove by that means what the spot of liquid was. One other case I heard of, also in Essex, when a skep was taken away bodily, and was afterwards found in a pond. The culprits were never discovered, but some gipsies were strongly suspected.

Many bee-keepers will now be preparing for the heather harvest. If they are obliged to trust to a friend to put supers on for them, they should be sure the work is done properly. A bee-keeper had a hive on a moor in Lancashire, and asked a friend (who was no novice in bee-keeping) to put a rack of sections on for him. That year the heather harvest was good, and

the bee-keeper went to take off his sections, expecting some prize-winners, but, alas! his friend had certainly put the sections on, and wrapped all down nice and snug, but had forgotten one little item—he never took the quilt from the top of the brood frames, and it had acted not only as a *queen* excluder, but also as a most efficient *bee* excluder.

Drones are usually reared about May, and killed off at the end of July or early in August. In 1906 I found drones in normal stocks as late as September 26th, and the following spring there were drones in a number of hives in Essex early in April, but that season was one of the worst for honey in that county for years. The summer was wet and cold, and the clover crop was an absolute failure, the average per hive from that source being 8lbs. to 10lbs. The previous year, 1906, one bee-keeper near Colchester had averaged 200lbs. per hive from six hives; in 1907 he did not take 200lbs. from the whole of his twenty hives, and had to feed. The only part of the county where good takes were secured was the south-west corner, about Ilford, Leyton, and Leytonstone, and this was from the large number of lime trees there are in that district. Mr. Faunch had 150lbs. from four hives, pure lime honey, and on September 20th, it was still being stored.

I shall always remember my first tour in Lancashire, the spring was so cold. I left home on April 25th, and at Sheffield there were five inches of snow on the ground. Liverpool was the starting-place for the tour that year, and the first day it rained all day. There was one advantage in this. As I could do no bee work I had a look round the docks, the splendid museum, St. George's Hall, etc. On April 30th I came face to face with General French, who was then holding an appointment in the North of England, and was making a tour of inspection. When I met him he was on his way to Seaforth.

EAGERNESS LINKED WITH CONTENT.

We love you, dear bees, for your quiet content;
You murmur and hum through the labour-filled hours
At peace with the way the blown grasses are bent
And the touch of the sun on the flowers.
In rhythmical time, like a fairyland chime,
Recurrent and smooth as melodious rhyme,
Your spirit croons calmness to ours.

And, oh how we love you, brave bees, for your flight!
Though gauzy your wings for such journeyings long,
You flash out and plunge into acres of light,
Exultant in swiftness and song.
A courage that sings—unhesitant wings!
You passionate, quivering, unafraid things,
What makes you so eager and strong?

If we all your simple contentment might learn
When straining hours clamour and press on us so,
And mount with your ardour where far visions yearn
When wearisome hours bring us low,
Awake and athrill, life's deep cup we should fill
With splendid achievement and quiet-wrought will,
Serenity, purpose, and glow.

—From *Gleanings.*

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

A NOTE FROM EARLSFIELD.

[9166] I believe you are interested in the bees, of the readers of the B.B.J., so write to tell you that I went to Woking (my home) on Saturday, and Mr. Aubrey came over to drive the bees from the skep with a view to taking the honey it contained. The skep should have been taken off two weeks before, as the excluder would have then been on three weeks. The bees were rather a long time making up their minds to go up into the empty skep, but finally they did so. All the cells which had contained brood were filled with sealed honey. I put a rack of twenty-one sections on and threw the bees on to the board in front of the hive, and although the sections were full of bees there were a number of them outside the

hive that could find no room. I had a rack for eighteen sections, so put that on top as well, and they all just managed to get in. There was no sign of any queen cells on the ten combs which were nearly full of sealed brood. We weighed the honey in the dish—seven nice slabs and a smaller piece. It weighed 24lbs., and there were about 2lbs. in a soup plate scraped out of the top of skeps. The dish weighed about 1½lb., so I got about 24½lbs. of comb honey. Mr. Aubrey will put some up for me for show purposes, and he says he thinks it will take a prize. He thinks there is nearly double as much in the ten combs.—C. H. ORCHARD.

CURING "ISLE OF WIGHT" DISEASE.

[9167] May I reply to numerous correspondents through your columns, as I cannot afford stamps or time to satisfy all? To do myself and applicants justice perseverance and intelligence are needed, and to bring the bees through safe and strong I feel that I should make a personal inspection of stocks affected to see their present strength. They must not be reduced to less than three standard combs, must have a young and vigorous laying queen, and the more brood the better. The combs must be reduced to what the bees will cover, and contain very little or no food. I put a few drops of my remedy in sweetened water, and spray bees and combs, using a scent spray, procured from a chemist at a cost of 2s. 6d. The bees are also fed on warm syrup medicated with my remedy. Should they refuse the syrup at this time of the year, spray often and well every day. Even with no disease I use the spray every fortnight as a preventive, and I find it keeps the bees extremely vigorous. I will, with pleasure, help anyone I can, and shall be pleased for anyone to make a call. Prevention is better than cure, and all stocks should be sprayed to keep them healthy. The trouble is that people wait till their stocks are so reduced as to make any attempt at a cure hopeless.—A. Trowse, 51, Eade Road, Norwich.

PRESS CUTTING.

TERRITORIALS IN INDIA.

The Territorial in India is not happy, and, not being apparently under the same restrictions as his Regular brother where communications to the Press are concerned, he has taken occasion to say so in print. Troops when they first go to India rarely are quite comfortable. One of the many complaints brought forward from regiments in Calcutta and Dinapur (a few hundred miles north of Calcutta) is that they are being eaten alive by mosquitoes. This, I am afraid, is one of the penalties that new blood, whether military or civil, will never escape—for your mosquito grows weary of feeding on sun-baked Anglo-Indian, and likes nothing better than something freshly landed from home.

It is a great mistake on the part of the papers to encourage Territorials to burst forth into print, and quite contrary to Indian Army Regulations for them to be permitted to do so. What are the C.O.'s of their regiments doing? If there is a bit of hardship and discomfort till they shake down it is only what might have been expected. Like the young bear, the soldier when he first comes to the East has all his troubles before him, and it is quite unlike the British soldier to make a fuss about what is nothing. The Territorials have been told as much by some of the old soldiers, who know that there is really no ground for all this grousing.

WILD BEASTS AND BEES.

There are many other things in India besides mosquitoes that bite and sting, and if the "'arf-fledged recruity" imagined that he was coming to a sort of glorified Kew Gardens when he shipped foreign, he ought to have got someone to tell him a few facts before he came. Tigers do not roam about your back garden, neither do snakes lie coiled up under your pillow, but there are a good many of these things about none the less.

It is only the newcomer, who has not assimilated the Indian atmosphere, who finds it difficult to accommodate his ideas to the change. If one of your servants at home died of plague in your back garden you would be greatly disturbed: out here we are not. The deader is removed, his dwelling place lime-washed and disinfected, and we carry on as before. Bees as weapons of offence constitute a very novel method, and one that even the Germans have not yet employed. But, in a part of India called Dinajpur the other day, when a band of marauders was rounded up by the police, the vicious Indian bee was used as an engine of war. An extract from a police report will give you a snapshot of the sort of thing that guardians of law and order are sometimes up against. "One of the Dacoits threw a small earthen vessel containing a cluster of bees at the face of the superintendent, who was attacked by the insects. Mr. Burton was also struck in the leg by an arrow. A reinforcement of police was brought up from headquarters, and the rioters, who fought with bows and arrows, were surrounded, twenty-five of them being placed under arrest."

If you have ever met the Indian bee

when he is angry, you will appreciate what the unfortunate Mr. Burton got. Why not try it on the Bosches? The Indian bee is worse than the English wasp, and far worse tempered. He has been known to make a tiger wish he never had been born ere now, and bears, whose fondness for honey is proverbial, have frequently had a very thin time of it when out for the sweets course. In another case of robbery under arms the Dacoits burnt several women and children alive because they would not give information as to the whereabouts of the valuables that were supposed to be hidden in the house on which the attack was made. It is a charming country in which to live when you know it—isn't it?—From the *Winning Post*.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

QUERIES ON SUPERING.

[9016] I should be much obliged if you would advise me through the BEE JOURNAL as follows:—(1) I supered an early June swarm about a week ago, with eight shallow frames, of drawn-out comb, which I had treated last winter with strong sulphur fumes for wax moth, and find that bees are rather slow in taking to them. Would such treatment of comb be objectionable to bees? Brood chamber filled and stock strong. (2) In what time may I reasonably expect the eight frames to be filled? (3) We have an abundance of heather here. Would you advise my putting sections on after shallow frames are filled, for heather honey? I found it very difficult to extract last year.—S. RICHARDS.

REPLY.—If there was any smell of the sulphur it would be objectionable to the bees. The combs should have been exposed to the air until the smell had disappeared. (2) This all depends on the season, the district, and the strength of the colony. It may take any time, from a week or ten days to a month. (3) We should prefer sections, as it is impossible to extract heather honey, and if shallow frames are used the comb has to be destroyed to obtain the honey. Have sections with comb drawn out ready for the heather harvest.

UNITING BEES.

[9017] In uniting queenless bees (which have been queenless for over five weeks and are a strong colony) to a stock of fair size, headed by a choice queen, would you cage the queen on a comb and alternate the combs, smoking both colonies well, or remove the queen, unite the two colonies early in the day, and then introduce her direct (fasting) after dusk? I may say I tried to introduce a virgin to the queenless colony itself about a week ago by means of a pipe cover cage, and looked at her twenty-four hours after caging, when the cage was almost entirely propolised over. I took her out then. Please advise.—J. C. GARVEY.

REPLY.—Read the article on "Uniting Bees" in RECORD for September, 1914. You may use either method of dealing with the queen, but we prefer caging her. You should have given the queenless colony a comb containing brood just emerging from the cells, a day before attempting to introduce a queen.

UNITING DRIVEN BEES.

[9018] *Re* 9015, "Uniting Driven Bees." I have something similar I wish to do, viz., drive three May and June swarms out of skeps and put the bees into a bar frame hive.

I have not any combs to provide them with owing to my own bees having had a slight attack of Isle of Wight disease in June. (1) Is it possible for the disease to leave a hive after it has attacked a swarm for about a fortnight, as I have not seen any crawlers or dead bees for a month, and they are working really well? (2) Can I drive the three lots into one skep? (3) While driving, will the result be serious (being quite a novice) should I miss the queens? (4) How do I proceed after I have them in a skep or skeps, as the case may be? Is putting them on a sheet in front of the hive the best way of hiving? (5) How long can I leave the driven bees in the skeps before putting into bar frame hive? (6) As I want to cut comb out of each skep and tie into six frames and put into centre of bar frame hive, What time of day is best to commence this operation, and how late

in August can I leave it to prove satistory?—C. Hammonds.

Reply.—(1) It may be possible, but is not probable. The disease often apparently disappears, but almost invariably breaks out again after a longer or shorter period. (2) Yes. (3) No; the bees or queens will settle the matter themselves. (4) Yes. Treat them exactly as you would a swarm. (5) They may be kept in a day or two if necessary, but it is better to hive them as soon as possible after driving. (6) Commence about 4 o'clock p.m. on a warm day; do not defer the work beyond the second week in August.

BEES IN A HOUSE WALL.

[9019] Having been a reader of your valuable journal for some years, and having profited many times in consequence, I take the liberty to ask your advice on this matter. Three weeks ago a 5lb. swarm of bees were discovered by a lady in a shut-up bedroom when she visited an empty house. They had clustered under the window-board inside, and had built comb covering about 3ft. by 9in. This was quite empty, there being no sign of honey or brood; the window being closed there was no outlet. The bees were taken in a skep by a gentleman and his gardener. Some ten days after this, on again visiting the house, it was discovered that bees were going in and out of the sash pulleys (the window being open), and were also using a hole in the joint of the brickwork outside, 3ft. from window.

I was then called in to see what I could do. On cutting out a brick I discovered that the wall was double, with a 4½in. cavity between the inner and outer walls. I came upon old comb, some black with age and some like the sample I send you. It covered 2ft. by 4ft. by 4½in., and weighed about 70lb. to 80lb.; there was no brood. After cutting out some comb I came to about a pint of bees in the top corner; most of these made themselves scarce in the joints of the brickwork. Beyond these I could find no bees, although I have tried all likely places, and well searched the roof inside and out. I fixed a clearing-board over the inlet so any bees can get out; there are no bees flying near the place this last two days. The strange part to me is the small number of bees I found, and the fact that the bees must have swarmed through the sash pulley, as the window was shut at the time. Do you think it is at all likely that the bees vacated the position, and the few left behind had no queen with them? Also, is the honey in piece of comb sent of this year's gathering?—H. J. Lewis.

Reply.—The bees had evidently been queenless for some time. The honey in the comb had not been gathered this year.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

Beginner (Redmire).—*Width of Entrance.*—(1) About 1in. in early spring closing to one bee space if there are any signs of robbing. Gradually make wider as the colony gets stronger, to four or five inches about May. When the honey flow comes take the slides right out. The entrance should be made quite narrow after the honey flow until danger from robbing is over. Leave it about 4in. wide during the winter. (2) Yes; if the weather is favourable. (3) This depends chiefly on the weather, but one cannot say even approximately. If close to or on the moor there is not only the shortening of the journey to and fro, but the bees are able to take advantage of short spells of fine weather and sunshine in the unsettled conditions that often prevail at that time of the year. (4) No; a drone trap causes congestion at the hive entrance, and is more trouble than it is worth. Do not allow the bees to breed too many drones. Weed out the combs containing too many drone cells when packing the bees up for winter, or place them next to the division board or the hive side so that they may be taken out in the spring before any eggs have been deposited in the cells—replace by frames fitted with full sheets of worker base foundation. (5) Yes; there should be at least six for the bees to winter on. (6) No. (7) You cannot destroy them by means of powders. Sprinkle powdered naphthaline between the inner and outer walls of the hives, under the lugs of the frames, and among the quilts. Hive No. 2. It would have been better to put another rack of sections under the first, instead of taking out the five completed ones, and you should have cut out all queen cells before returning the cast. It would be as well to examine the brood combs to make

certain that the queen is mated and laying, and if she is not, remove her and introduce one that is.

We are sending you a specimen copy so that you may judge for yourself.

"DONNO" (Chilwell).—*Clearing Supers.*—To get the bees out in anything like that time you would have to use a very strong solution of carbolic for the cloth, which would taint and spoil the honey. We should prefer to take the super a distance away from the hive and shake the bees off, using a feather, or a twig from a bush, to brush away those that refused to be dislodged by shaking.

McC. H. (Tenterden).—Natives cannot be beaten for that purpose. Dutch bees resemble natives in most respects, but are more resistant to "Isle of Wight" disease. They are prone to excessive swarming.

F. C. W. (Wisbech).—We cannot recommend it. The weather is often unsettled at that time, most of the drones are killed off, and there is a difficulty in getting the young queens mated. The best plan is to rear a young queen in a nucleus so that she is mated and laying by the time the honey flow is over; the old queen may then be removed and the young one introduced.

P. J. S. (Notts.).—Under the circumstances we think your best plan would be to drive the bees out of the box and tie as much as possible of the comb containing brood into frames, rehive the bees on them in the new hive, and feed up for winter.

J. A. N. (Higham).—Nos. 1 and 2 are natives. No. 3 are wild bees, a species of Andrena.

C. J. L. (St. Asaph).—We cannot give any reason. It appears to be only a curious coincidence.

Honey Samples.

"DILIAU" (Bargoed).—(1) Clover with a little fruit or tree honey. (2) The colour is just within the B.B.K.A. definition of light honey; density and flavour fair.

"Black Bees" (Paignton).—Both samples are good. No. 1 is the best for density, and No. 2 for flavour. They are both worth entering in a local show. We prefer No. 1, which is worth trying at a large one. No. 2 is beginning to granulate and needs warming to clear it before being placed on the show bench. (2) Yes; if it comes from healthy stocks, do not use much water. It is not necessary to use candy if natural stores are abundant.

Suspected Disease.

A. E. CROSSLAND (Matlock); R. BYATT (Chester); A. "BEE JOURNAL" READER (Staffs.).—The bees are suffering from "Isle of Wight" disease.

S. J. (Upwey).—There is nothing wrong in the comb, but "Isle of Wight" disease cannot be diagnosed from the brood, as it affects the adult bees only.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Tuesday, August 3rd, 1915.—Bridgnorth and District Bee-keepers' Association, held in connection with the Hampton Loade Horticultural Society. A good prize schedule, open to Shropshire, Staffordshire, and Worcestershire, as follows:—Class I., 6 Sections of Comb Honey, 1st prize, bronze medal of Shropshire B.K.A.; 2nd prize, 5s.; 3rd, 2s. 6d. Class II., 6 Jars Run or Extracted, any colour, 1s. each entry, 7s. 6d., 5s., 2s. 6d. Class III., Open Gift Class, 1 Jar, to be sold by Association, 7s. 6d., 5s., 2s. 6d. Class IV., Open Gift Class, 1 Section, to be given to wounded soldiers, entry free, 7s. 6d., 5s., 2s. 6d. There are nine Classes for Members of the Association. Schedules on application to J. S. Lawton, 77a, High-street, Bridgnorth. Honey to be addressed to J. S. Lawton, Hampton Loade Station, G.W.R. —**Entries closed.**

Monday and Tuesday, August 16th and 17th, 1915, at Cannock, Staffs.—Honey Show, in connection with the Horticultural Society's Show. Eight open classes. Schedules from J. Bird, F.R.H.S., Glenmay, Cannock.—**Entries close Tuesday, August 10th.**

August 5th, at Madresfield, Malvern.—Annual Show of the Worcestershire B.K.A. Prizes, £10, and Challenge Cup. Four open classes. Entry fees, 1s. for first entry; further entries, 6d. each. Schedules from George Richings, 2, Shrubbery-terrace, Worcester. **Entries close August 2nd.**

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of. Driven bees, Nuclei, and queens that are reared or imported for sale, are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the 'Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

FOR SALE, splendid stock of Black Bees on 10 bars, 30s. Also stock of Golden (Sladen's strain); several young queens, Goldens, 4s.—KIRKHAM, 51, Church-street, Altrincham. v 86

WANTED, apiary of about 75 stocks (with poultry accommodation preferred) about 50 miles North-West of London. Must be free disease, and hives good condition. Rent moderate. —Particulars to Box 2, "B.B.J." Office, 23, Bedford St., Strand, W.C. v 85

EXTRACTOR, Cowan's 4-frame reversible, geared, £2 or offer. Also 50 new W.B.C. hives, £5.—ROBERTS, 5, Tonbridge-road, Maidstone. v 84

EXPERT would undertake tour; experienced; references.—EXPERT, "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 89

TAMLIN'S Nonpareil Incubator, 100 eggs, latest style, with book of instructions, 55s., or exchange for driven bees; stamp for reply.—B. CASTLOW, 72, Nicholson-street, Portrack-lane, Stockton-on-Tees. v 83

BRICE'S Observatory Hive (Lees), almost new, 10s. 6d. A few 2lbs., 4lbs., 28lbs. honey tins, lever lids 1d., 1½d., 8d. each respectively. Particulars 1d. stamp.—J. YOUNGER, 29, Newmarket-road, Cambridge. v 82

WANTED, secondhand Conqueror hive (single), must be cheap.—GORDON, Langley Bungalow, Pevensey Bay. v 80

FOR SALE, 2 steam melting uncapping trays; also 2 50lb. tanks; few selected Carniolan, Italian, queens.—CRAWFORD, Castlederg, Co. Tyrone. v 79

W.B.C. HIVES, good condition, 6s. 6d. each; selling through bereavement.—MRS. OWEN, Risby, Bury St. Edmunds. v 78

GUARANTEED strong, healthy, established swarms, 8 frames, £1; honey, 16s. 6d. per 28lbs; 9s. 6d. per dozen bottles.—RALPH, Llandyssil, Montgomery. v 72

FOR DRIVEN BEES; rapid Canadian feeders, to take ten pounds of syrup, 2s. 6d. each; gross dovetailed standard frames, 10s.; 2 doz. bottle feeders, 1s. each; a few Porter bee escape boards, 1s. 6d. each; tin slotted separators, 6d. per dozen.—Box 10, "B.B.J." Office, 23, Bedford-street, W.C.

COMB HONEY, clean, white, well filled, early honey sections.—BLANKLEY, Honey Cottage, Denton, Grantham. v 64

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SOOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

WILKES' free-way excluder and non-swarming method have resulted in enormous takes of honey; sample excluder, 2s.; illustrated work explaining prevention of swarming, with many photos, 1s. 1d.; send for 1915 catalogue, all post free.—WILKES, Four Oaks, Birmingham.

CHOICE PROLIFIC ENGLISH QUEENS, 1915, selected and tested, bred from non-swarming stocks, 5s. 6d. each; safe arrival guaranteed; 12th year.—ARTHUR H. WILKES, Four Oake.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

NATIVE QUEENS, 1915, healthy, 4s. each. Nuclei, 3 framed.—HUNT, Westmoors, Dorset. v 87

FOR SALE, strong stocks English bees, on 8-wired combs, 21s. Splendid workers, healthy apiary and district, boxes returnable.—THOS. CORNEY, Ramsey St. Mary, Huntingdon.

FINE July Swarm, hived on 10 frames, full sheets, foundation, 10s 6d.; driven bees in August, 1s. 3d. lb.; order early.—KNIGHT, Kenwyn, Truro. v 88

VIGOROUS, prolific queens. Virgins, 2s. 6d.; mated, 4s.—MUNRO, 13, Bank Avenue, Dundee. v 81

ITALIAN QUEENS, pure, fertile, 1915, reared by well-known breeder in France, 5s. 6d. each. —ELLIOTT, Kelvin-road, Ipswich. v 57

HEALTHY driven bees, with queen, commencing August 2nd, 5s. per lot; boxes returnable; orders in rotation; cash with order.—T. PULLEN, Ramsbury, Hungerford. v 66

BRICE'S BRONZE MEDAL QUEENS (23rd season), special 7s. 6d., selected 5s. 6d., guaranteed.—BRICE'S APIARIES, Green-street Green, Orpington, Kent.

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d. post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 41

SECTION Glazing, lace paper strips, 7d. per 100; lace bands, 3in., 1s. 3d. per 100, post free; good section racks, slotted dividers, followen and wedge, complete, 1s. 6d., as new; also section racks, complete, 1s. 3d. each.—W. WOODLEY, Beedon, Newbury.

THE GELSTON CURE

For the Isle of Wight Bee Disease.

Highly recommended by M. T. Batten, who, in a letter to the *British Bee Journal*, November 12, 1914, stated: "I have had no further trouble since using the Gelston Cure." Mr. Davidson, Morpeth, writing on April 20, 1915, for another bottle, says: "It has kept mine free since November."

Price 1s. 3d. and 2s. 6d. per bottle, post free, with instructions.

GELSTON & CO., The Pharmacy, Basingstoke

MEADOWS BEST BEE APPLIANCES
SYSTON near LEICESTER *Send for* **KAT-A-LOG**
Extractors, Honey Tins, Boxes, &c

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the names and addresses, together with the regiment and rank, of any bee-keeper serving his King and Country; also if killed or wounded.

BLURTS FROM A SCRATCHY PEN.

A VISIT TO JERSEY.

From an educational point of view Jersey children have a great advantage over English children. At school they are taught English, at home they imbibe French; therefore, willy-nilly, they have to speak two languages. On the face of it it seems good, but it has occasionally its comicalities. As, for instance. My room was sufficiently near a long stretch of road so that I could hear the wayfarers for not a short distance. Early one morning, at about six, some children, out of bed betimes and full of song, as young birds are when the sun is just peeping over the horizon, came trooping along, and lustily chanted as they marched. Their repertoire was remarkably ample. First we were treated to the "Marseillaise" in the best of French, then came "It's a long, long way to Tipperary." To let all know they were pious children "Rock of Ages" followed. Possibly somewhat as a steadier, for I blush to say that the next was a "chanson" from the "Cafés Chantants" of Paris, which perhaps it was as well should be rendered in French. But there was no mistaking the origin of the last, as the voices died away in the distance, "Hello! It's a Different Girl Again."

I am not going to weary you with dry details of a week's packing of bees, but one little swarming vagary might interest. On the very last day while at work two swarms issued from separate hives. One I located at once, but the other seemed absolutely to vanish. I had given it up as another wanderer, but at last I came to the end of my work, the final travelling box. On this the previous evening I had placed the top of a spare hive to protect from rain and sun. As I lifted this, behold there was the vanished swarm. Needless to say, it found a home in another travelling hive, instanter.

Four a.m. the day of our departure. The maid calls me in the dusky morning twilight, but I am up and dressed. Two drays arrive at five and off we start. It is an hour to the boat and she is due to leave at six. By judicious application of the usual metallic anointing of the hands we get all safely aboard and snugly stored on the lower deck, each on its own base, nothing superposed. Did ever a Jersey steamer have such a record of passengers? something like 600,000, not counting the humans. If Von Tirpitz had only known!

Of course we attracted much attention, and for benefit of both passengers and crew I was compelled to give several impromptu lectures. Now I question if even our junior editor, with all his experience, had ever such a place for a lecture and such an audience—above, the rigging of the ship and the bright blue sky; beneath, the thud of the engines to punctuate the sentences; around and on the ship-side the scream of the sea-gull and the swish of the waves. The audience comprised everybody in turn, from the captain on the bridge to the stoker from the fire-hole, for the word was soon passed round that there was a cargo of bees abroad, and that someone was yarning about them.

Thankful I was that the sea was so smooth—only a slight swell. Personally, I am but little troubled by sea-sickness, but if my passengers had been affected it might have been a novel and perhaps interesting experience to report about in our Journal. Excepting that as we approached "a place in England" we noticed a torpedo destroyer carefully watching over our safety, nothing exciting occurred. Again the cargo had to be transferred from ship to quay.

His Majesty, I am sure, has no smarter, conscientious, or more energetic officer than the one who serves him at the "place in England" where we landed. He observed forty boxes all one size, clean, numbered in rotation, and, above all, carefully superintended by a passenger. Naturally his suspicions were aroused as to what were the contents of those boxes and what kind of contraband they might contain. The passenger was invited to explain, and the assertion that these were only bees seemed not to find acceptance. Possibly he conceived that in the interior might be discovered some duty-liable tobacco or eau-de-Cologne, and he insisted that one or two

of the cases should be opened. It was pointed out that this might cause grave inconvenience and annoyance to the bystanders. However, as he still insisted that a search must be made, the passenger was exceedingly anxious to oblige him, and desired to know which of the boxes he would wish opened as a sample of what the others contained. An exceptionally strong colony was selected, and preparations had begun to be made, when a closer examination by the Customs officer through the perforated zinc on the top convinced him that perhaps there might be trouble, and so they were permitted to pass. The passenger has an idea that he scored.

I have nothing to tell of the rest of the adventure, except that "in the wee sma' hours ayont the twal" the cargo arrived safely at Luton, not a comb broken.—Jno. Smallwood.

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

QUEEN REARING AND INTRODUCTION.

(*Continued from page 227.*)

Another simple method is to utilise natural queen cells built by a stock having a desirable mother. Those in the most accessible places for removal without injury to the comb should be taken by cutting well round them with a sharp warm knife, Fig. 21, so that an ample base is left. These are then fitted into flanged wooden cell cups by shaping the base to fit. Fig. 22 shows these cups and the cells trimmed

Fig. 21.

to fit into them. When placing them in position a little pressure will make them stick tight, Fig. 23, until the bees fasten and complete them. Fig. 24. To hold the cell cups in position, and also protect them against attack by the queen of the stock in which they are placed, a queen excluder cell cup holder made by Mr. W. P. Meadows should be used. Fig. 25 shows this holder empty; at Fig. 26 the cells are in position, while the method of suspending it in the hive is seen at

Fig. 27. A record of the age of the cells must be kept, so that they may be taken out and utilised in stocks or nuclei just before the young queens are due to emerge, or the first one out will destroy the other two.

Occasionally a stock will tear down the queen cell when given; in such a case it is necessary to enclose the next one given in a protector, made by bending a piece of perforated zinc to encircle it, with the pointed end left open so that the princess can get out of the cell, as shown at left side Fig. 28; the position of the cell is more clearly seen in the centre, where a portion of the zinc has been cut away to expose it to view. If it is not desired to use the perforated zinc, a spiral cell protector, shown on the right side, may be purchased from any appliance manufacturer.

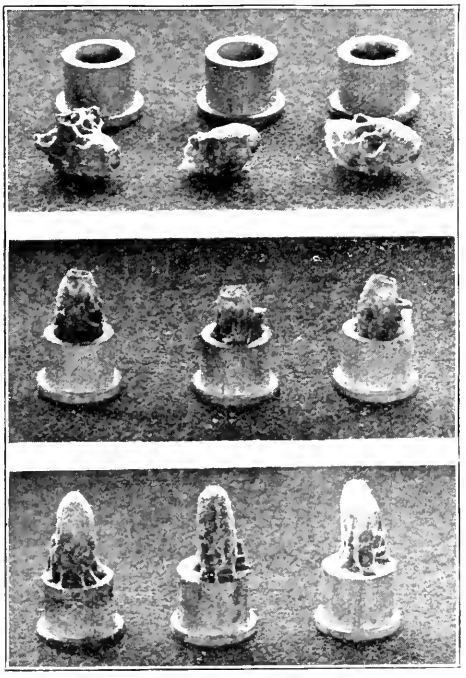


Fig. 22.

Fig. 23.

Fig. 24.

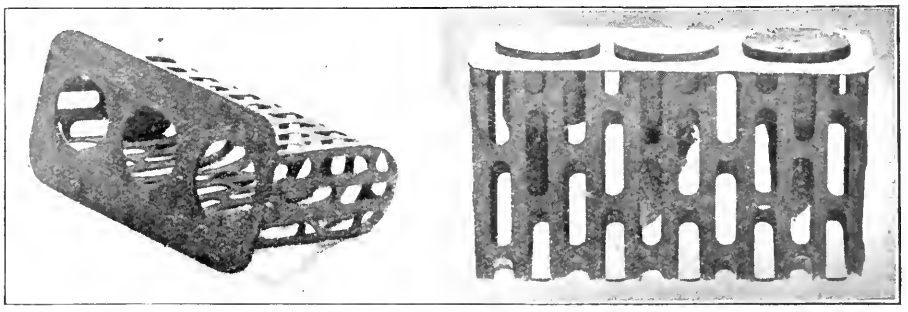


Fig. 25. Fig. 26.

Another appliance which should be in more general use where a fair number of queens are required is the nursery frame. As seen at Fig. 29, it is a frame fitted with fifteen cages, covered on either side with wire cloth. In the top two holes are bored, Fig. 30, one in the centre large enough to take a flanged wooden cell cup, and the other a little to the side for food, which is made by mixing granulated honey, castor sugar, and a little wheat flour to a stiff paste. The cells when cut out are inserted into the cell

cup, as already described, or they may be fastened with melted beeswax on to a cork made to fit into the hole. The food hole is filled, and the cages placed in

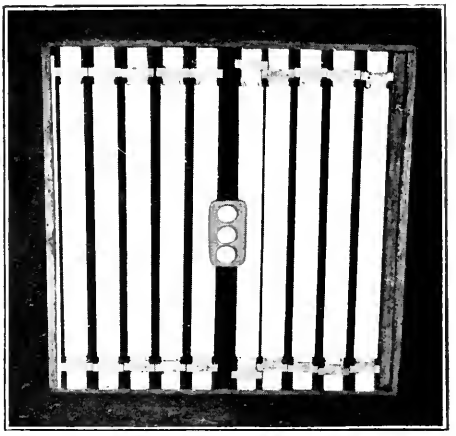


Fig. 27.

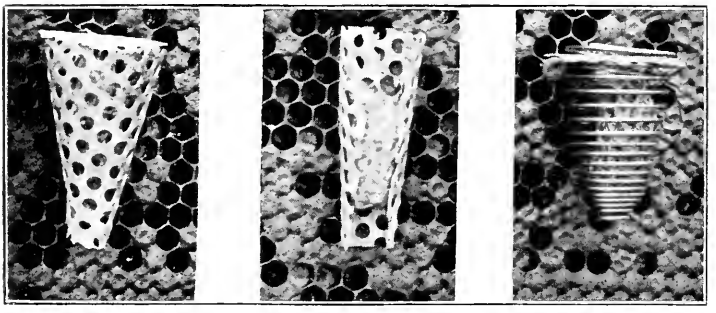


Fig. 28.

position in the frame, Fig. 29, which is then inserted into a strong stock until the virgins emerge, as seen at Fig. 31. Although she will feed herself, it is unwise

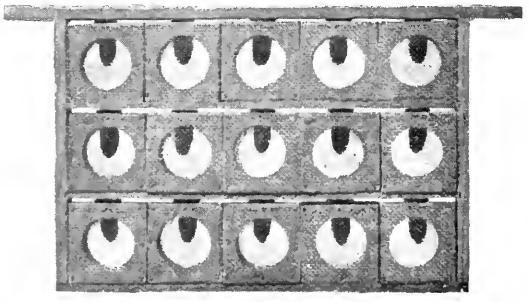


Fig. 29.

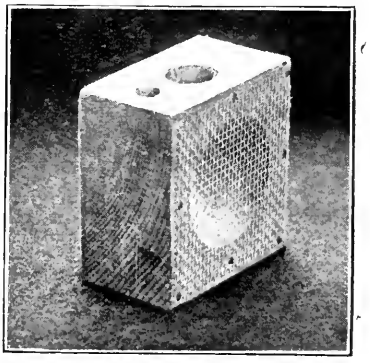


Fig. 30.

to let her do this for long. Therefore, as soon as each virgin is out a few workers from the stock in which she is born should be put in with her, Fig. 32, for safety;

those just emerged should be chosen. The cage can then be used to introduce the queen is another stock of nucleus, as described later.

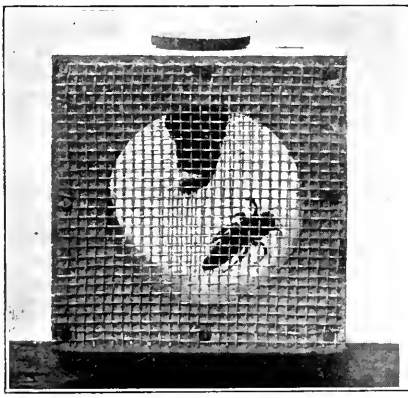


FIG. 31.

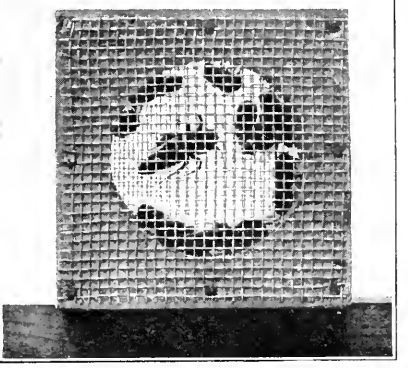


FIG. 32.

(To be continued.)

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

WHO IS RIGHT?

In the "B.B.J." of July 17th, Mr. Herrod-Hempsall, in his useful hints for beginners (and for old hands as well!), states that queens should on no account be bred from yearling mothers, and that a good mother should be bred from even in her fifth year.

Far be it from me to contradict Mr. Herrod-Hempsall, the guide and counsellor of beginners. There is only one man whose contradiction of him can have any real weight—and that is Mr. Herrod-Hempsall, the Junior editor of this journal.

Now, in the self-same issue of the "B.B.J.," the latter called the attention of readers to Mr. S. Simmins's book, "A Modern Bee Farm," whence (as he says nothing to the contrary) we must conclude that he endorses its teachings—among others, that no queen should on any account be bred from anything *older* than a yearling mother. Moreover, I seem to recollect that, not so long ago, the "B.B.J." came out with a most fulsome eulogy of Mr. Simmins's book, expressing no dissent from any of its doctrines. Whom, then, is the ordinary perplexed bee-keeper to believe—Mr. Herrod-Hempsall the guide, or Mr. Herrod-Hempsall the editor?

To speak frankly, the position strikes me as little short of ludicrous. Here are the small bee-keepers of England anxiously struggling against a strange disease and looking to their more experienced brethren for advice. For aught we know, the age of queen-mothers may be the very crux of the solution of our difficulties. Yet the "B.B.J.," which poses as a publication for the small bee-keeper, has not sufficient courage to point out to its readers that the opinions of two experts are in direct conflict, but contents itself with the cheering advice to destroy stocks, and urges us to call for legislation making such destruction obligatory.

Why should I call for legislation on the lines suggested? You tell me that the disease is catching; but you have not proved it. How do I know that it is not constitutional? I believe it has been shown by experiment that the bacteria of *nosema apis* exists in quite healthy stocks, and that it is strongly suspected that it has so existed in England for centuries. Does this not suggest the idea that the constitution of our bees may have been weakened for some reason? And, if so, may not the age of queen-mothers be the cause of such weakening?

I do not say that it is so. If Mr. Simmins and Mr. Herrod-Hempsall have ever carried out scientifically conducted experiments as a foundation for their conflicting doctrines, they have been most careful to keep the fact secret. Hence the "man in the street" has no means of telling which of the two has written arrant rubbish—for

it is abundantly clear that *one* of them has done so—and rubbish, too, that may have been the cause of our trouble.

And, if it is—if, in fact, the majority of our queens have been bred from mothers that are too old or too young—what good is burning going to do? Will it prevent my continuing to make the error? In heaven's name, let us behave like rational beings, first deciding what object we desire to attain and then (and not till then) using all our efforts to attain it. What we require are statistics—statistics of all kinds; and surely it is the duty of the "B.B.J." to collect these. Until we have them, we are merely beating the air; but when we get them, we shall then know the extent of our ignorance—which knowledge is the foundation of all wisdom.

Unfortunately so few bee-keepers make notes of their observations, and many of those that do so are (to judge by the text-books) influenced by a desire to make them square with some previous conviction. Still, there must be *some* whose notes are fairly reliable and complete; and I suggest that these send them for publication in the "B.B.J." It does not matter in the least what those notes consist of—they may contain only weather reports and the dates of swarms: who knows that such may not be of value? And let every responsible bee-keeper resolve henceforth to keep notes and to forward them yearly (or biennially or triennially) to the "B.B.J." At least we shall then feel that we are making headway. In a few years we shall thus have the results of experiments along several definite lines, which can then be followed up more particularly. And if financial assistance is required for these later experiments, I have no doubt whatever that several bee-keepers would be willing to spare a trifle towards the furthering of a really serious inquiry. I would myself at this moment cheerfully give a sum that would go far, could I be assured that it would be sensibly expended. My own notes are too incomplete to be of value, as my experiments have been twice interrupted—first by a two years' sojourn abroad, and now by military duties.—H. Campbell.

[To avoid being accused of partiality, we print the above *in extenso*. We are sure that our friend writes in the interest of the craft, but we strongly recommend him to verify his quotations before he rushes into print, and to keep to relevant matter. Firstly, there was no issue of the British Bee Journal on 17th July, nor can he mean the nearest date, *i.e.*, 15th July, as there is no mention of Mr. Simmins made in that issue. But on the 17th of June, which perhaps is the date our correspondent alludes to, a reference is made, the only one in the issue, concerning Mr. Simmins, as to the strength of the Izal solution he uses and recommends. What Izal has to do with queen rearing we fail to understand; perhaps our correspondent will enlighten us as to what he means.

Our *fulsome* review of Mr. Simmins's book runs to nine lines, which are as follows:—"The author has had a long experience of bee-keeping, and has invented many appliances in connection therewith. Although not orthodox in many of his operations he has the courage of his convictions, and writes fearlessly of what he has done, without cant or plagiarism, and is at all times courteous to those who have opposite views to himself."

Thus it will be plainly seen that we do not agree with all Mr. Simmins's methods, and have the courage to say so. There is therefore no necessity for us to pursue our friend's letter further.

We agree to differ with our friend Simmins on some points, but there are a great many in which we are entirely in accord. This is the case in all pursuits. Surely our correspondent would not wish us to damn a book because we do not agree with *all* the author says.—Eds.]

SWARMING BEES AND A NEST.

A pair of garden warblers built their nest this season in a young fir tree in a friend's garden, and in due course the young ones appeared. About the same time, however, a neighbouring hive of bees swarmed, and the swarm alighted on the tree. In addition to the danger to which the nestlings were exposed of being stung, there was the difficulty of catching the swarm and removing it without molesting the birds. The owner of the bees eventually got out of the difficulty by lifting the nest bodily—fledgings and all—and transplanting it to an adjacent tree. He was thus able to go on with his work without fear of disturbing the young warblers. For a time the mother bird would not go near the tree to which her home had been thus unceremoniously borne, but eventually both she and the male bird returned to the hungry offspring, and family life was resumed under the new conditions just as if nothing unusual had happened.—J. A. S. W.

—From *The Scotsman*.

PREJUDICE AGAINST BEES.

It has often been a matter of surprise to us, especially when out in the country, to find among some people, more particularly among gardeners and farmers, a great prejudice against bees, these industrious little insects being credited with spoiling flowers, eating fruit, etc. This prejudice is, we are pleased to say, fast dying out, owing largely to the efforts of

bee-keepers and their associations, and fruit growers more than any other class are valuing the bee at its true worth as one of their greatest benefactors. It is interesting to know that prejudice against bees is not confined to this country only, as the following extract from *Gleanings* will show:—

UNREASONING PREJUDICE AGAINST BEES, CATS, DOGS, ETC., ON THE PART OF SOME GOOD PEOPLE.

Some two weeks ago the editor of the *Rural New-Yorker*, Mr. H. W. Collingwood, inclosed a letter from a correspondent complaining somewhat of the attitude of the *Rural* because it recognised the valuable work of the bees in pollinating fruit-trees. This correspondent went on to state that bees were causing blight on his fruit-trees, and that they were a nuisance generally. We prepared a reply showing that, while bees might scatter blight, they do tenfold more good than harm in making more and better fruit, and that the damage they do to trees is not nearly as serious as stated. This reply appeared in the *Rural New-Yorker* for June 12th. In acknowledging the receipt of this, Editor Collingwood, in his usual characteristic way, writes:—

Dear Mr. Root,—I thank you very much indeed for your letter and for the article, which seems to me a very sensible one. I am glad to get this, as I think it puts it up to our readers just right. I find that people appreciate a good strong discussion of a subject, and want to have all sides of the matter brought out.

For some reason, which I have never been able to understand fully, we have a class of people in this country who have no use whatever for a "bee." Some people, as you probably know, vent a lot of spite on a dog. I know a man who hates a cat on general principles, and every time he goes out hunting he shoots every cat he can find, no matter whom it belongs to. I have another friend who, unhappily, thinks a child is about the worst nuisance that ever came into the world. I have seen him look at children, and I knew perfectly well that he was saying to himself, "Oh for the days of good King Herod!" and so there is no use trying to analyse these pet hatreds or pet abominations. Some men can see nothing about a bee except a very instructive word he carries at the end of his tail. They can appreciate his arguments in that line, and do not want to know anything more about him; and so I am glad to have our friend, the busy bee, have his innings, and I am much obliged to you for sending me to bat with a fair chance of making a base hit or a home run. One of them made a base hit on my little boy the other day, and the boy certainly made a home run for the house. He went back, however, as he now has a hive of his own, and he is getting to be something of a bee-keeper.

H. W. COLLINGWOOD.

New York, May 26th.

Mr. Collingwood strikes upon a point that is worth bringing out—the unreasoning prejudice on the part of some good people against certain useful animals. While we admit that there are useless curs that are a menace and a nuisance to the public generally, there are some dogs that are invaluable. Years ago, when A. I. Root was raising garden truck and running a series of cold-frames and greenhouses, some big and little dogs persisted in walking over these cold-frames and breaking the glass. To him a dog was about as useless a thing as one could have on the premises. He was overrrun with rats in spite of steel traps and cats. Much to his chagrin, the children got a little black-and-tan rat terrier; and he was a holy terror to rats. He kept so everlastingly after them day and night that he drove them off the premises; and for three years after his death not a rat showed up. From that day to this, A. I. R. has had a most wholesome respect for *some* dogs, and particularly for *that* dog. He has always believed in good cats for catching mice.

Some of our friends the fruit-growers have a similar prejudice against bees. Some day they will wake up, like A. I. R., and discover that the very thing they once regarded as an enemy is, after all, one of their best friends.

THE WEATHER.

This is a well-worn, but to the average Briton never a worn-out, subject. Whenever a couple of friends meet, or even merely pass each other by the way, ninety-nine times out of a hundred their greeting to each other is a remark on the weather. "It is a fine day," or "It looks like rain," etc. An old friend used almost invariably to add, "But I expect you know." This interest is accounted for by our varying climatic conditions—British weather is notoriously erratic. Our summer has been described by an American as "Three hot days and a thunderstorm." Bee-keepers always have their weather-eye open—or shall we say their eye on the weather, for it means much to them. Who among them has not experienced that feeling of sickness due to hope deferred during a wet, cold spring, when the trees have been laden with bloom, which the bees have been unable to visit? How often later in the year a long period of hot dry weather parches the clover, and the thirsty ground gapes with cracks, until the dry

spell is "broken" by a thunderstorm and a torrential downpour? and again day after day it is rain and still more rain, with a fine day interspersed here and there, during which, and in brief spells of sunshine between showers, the bees are just able to gather as much nectar as will keep them going. This seems to be the general condition just now from reports one may read in the papers. But when all is said, more honey is stored during a wet season than a dry one.

Our American friends generally have some sarcastic comment for our weather, something like that quoted above; but a perusal of the reports from various parts of the U.S.A. in *Gleanings* for July 1st goes to show that ideal bee weather does not always prevail there—an idea that many bee-keepers in this country hold. The first paragraph of Editorials is headed, "Honey Crop Conditions; A Queer Season," and runs on "The severe and prolonged drought in southern Texas, cold, chilly weather in California, frost and freezing and backward weather in Colorado and the mountain districts; too much rain and cold over a large part of the clover districts in the north-central States where clover was promising; drought in New York and parts of Pennsylvania, and unfavourable weather in the East, have had a tendency to put a damper on the hopes of bee-keepers all over the country. In the meantime conditions have improved in California, and some bee-keepers have already secured a crop.

"Up to as late as the 24th of June we have been having cold nights and cold, windy, sunless days. Clover was abundant in patches, but the temperature was too low for the proper secretion of nectar. Precisely the same conditions prevailed in many other localities where clover was promising. But, fortunately, the continued spell of cold has been broken, and good honey weather is now on, and it looks and *feels* as if it would stay on. Our bees have taken a new start, and there is just a chance for us to secure some honey, as basswood was never more promising. In Michigan, Wisconsin, Minnesota, Canada, northern New York, and the New England states, this warm weather will probably come soon enough to catch all the honey that there may be in clover. In the clover districts further south clover has been out for two weeks, and there are good chances of a light crop, as there are at least ten days more of clover, with splendid prospects for basswood where there is any.

"Taking it all in all, it is impossible to predict what the clover crop will be, although it is safe to say it will not be large, except, perhaps, in the more northern states.

"Many reports speak of the immense amount of clover in bloom, while others say that it is very scarce.

"Prices should have an upward trend on all grades of honey, particularly on southern honey, which has been a failure in many parts of the south."

If the honey crop in America is a partial failure there will not be so much to export, and this should reflect on the sales, and probably on the price, of our home produced honey. The difficulty in selling now appears to be the lack of bottles. A great feature in the successful marketing of honey is its appearance. Most producers of sections are aware of that, but it also applies to extracted honey. The very best honey will not sell so well if put up in opaque jars, even though they may be more expensive than clear glass bottles. There appears to be an opening either for some of our glass manufacturers to put on the market a good bottle at a reasonable price, or for someone to invent a substitute that is transparent.—J. H. H.

REMEDIES FOR STINGS.

Stung again! Gnats, mosquitoes, flies, midges, harvesters, and other inveterate blood-suckers have begun their summer campaign against humanity in particular and animals in general. The infuriated honey-bee and the irritable wasp, though less aggressive and annoying in the main than more miniature plagues, must be included in the catalogue of the winged armies of the air. As a rule, neither wasps nor bees sting without provocation, intentional or otherwise, but many insect aggressors, not in self-defence, attack us—assaults against which we, to a great extent, are powerless to defend ourselves. There are fortunate folk who are partly immune from the infliction; less lucky persons cannot account for this discrimination of the vampires, since one mortal, as regards the outer cuticle, is so very like another. There are endless recipes for the prevention of bites and stings, and quite as many for their alleviation.

A lotion that is of the kind last mentioned consists of an ounce of glycerine mixed thoroughly with an ounce of rosemary water and twenty drops of carbolic acid. The carbolic neutralises the poison in the blood, disinfects the eruption, and heals it rapidly. A solution of carbolic, say, 50 drops, in an ounce of glycerine, applied night and morning, is a protection from mosquitoes. Prevention, admittedly, is better than cure, but I am giving a list of palliatives as well as preventives—both very useful in their respective ways. To be forewarned is to be forearmed. A

lotion recommended to ward off the attack of midges and other species of the gnat tribe from the face, neck, wrists, and ankles consists of two ounces of eau de Cologne and a drachm of pennyroyal water, shaken together and afterwards sponged on parts exposed to assault. Hazeline and cloudy ammonia in combination will relieve the pain and irritation if stung.

Very efficacious in like cases is a paste made of toilet powder, moistened with chloroform and eau de Cologne in equal parts. A very useful deterrent is an application of one part of alcohol to nine parts of crystallised carbolic acid, and if stung the same lotion is an excellent palliative. An infusion of quassia chips and oil of cloves is recommended as a defence against insect tormentors; quassia is very bitter, and if the solution is sponged over the face, etc., the most bloodthirsty gnats and the most adventurous midges will merely sniff and at once retire. The scent of cloves is very strong, and if a little oil of cloves is rubbed on throat, at the roots of hair on face and wrists, it will usually keep off the insects which hover round trees and water in summer-time.

(To be continued.)

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

USING IZAL.

[9020] (1) Is honey in any way affected and made unfit for bees or human consumption that come from hives having "Isle of Wight" disease? (2) How to use Izal in hives amongst bees and combs, and does it affect the taste of honey? (3) How long might the "Isle of Wight" disease be in a hive before its presence could be seen?—B. W. J.

Reply.—(1) See reply to "W. H. J." (2) Use a very fine spray. You should not use it in the supers; the honey will not then be affected. (3) It is impossible to say.

USING HONEY FROM DISEASED STOCKS.

[9021] I have nine stocks of bees, four of them being affected with "Isle of Wight" disease. One of the affected stocks has had 56lbs. of super honey taken from it this season, and the brood frames have a fair amount of stores. I propose destroying the affected stocks. Will any honey which may be in either frames or sections on these affected hives be fit to eat, provided the combs are destroyed after extracting the honey from them?—W. H. J.

Reply.—Yes.

QUEENLESSNESS.

[9022] I am enclosing a capped queen cell which I cut out to-day. I had one stock from last year, and as it was particularly strong the earlier part of the season I divided it up, taking one frame with the queen on, putting in a new hive, removing the old hive a few feet away, and putting the new hive in the old position. This was the 24th May. I discovered after about three weeks that the old hive had three queen cells sealed, and later on I opened one and found a decomposed piece of matter there. I gave them a new comb of brood from the new hive, and to-day I again noticed no queen or brood, but three capped queen cells, one of which I am sending for your kind advice, under the circumstances. I believe I could get a driven lot of bees, and would you suggest to mix them? If so, what method is the best to unite them? They are in nine frames, but I think they would be better in about six with their present number. They have worked well, and I have taken 24lbs. of honey from them, but they seem rather slack just now. Thanking you for past favours, and in anticipation of further good advice from you.—A. Fry.

Reply.—The stock has evidently become queenless. The cell you sent contained a larva whose death was caused by its being precipitated by some means to the point of the cell and away from food, so that it was starved. It will be a good plan to unite some driven bees. To do this take out about five of the combs, shaking them free from bees, put in a fresh hive or box, and place about a yard away from the established stock. Hive the driven bees on to these combs, and when the bees have been working for about a week unite in the usual way.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

C. L. Martin (Devon).—You can, no doubt, obtain the labels from the Secre-

tary of the Devon Association, Mr. R. W. Furse, Woodboro'.

Honey Sample.

KIRKHOUSE.—(1) Mixed sources. (2) Dark. (3) Mixed with ragwort.

Suspected Disease.

C. F. M. (Leamington), TROUBLED, and B. E. A. (Leicester).—It is "Isle of Wight" disease.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Monday and Tuesday, August 16th and 17th, 1915, at Cannock, Staffs.—Honey Show, in connection with the Horticultural Society's Show. Eight open classes. Schedules from J. Bird, F.R.H.S., Gleumay, Cannock.—**Entries close Tuesday, August 10th.**

August 5th, at Madresfield, Malvern.—Annual Show of the Worcestershire B.K.A. Prizes, £10, and Challenge Cup. Four open classes. Entry fees, 1s. for first entry; further entries, 6d. each. Schedules from George Richings, 2, Shrubbery-terrace, Worcester. **Entries close August 2nd.**

PRIVATE ADVERTISEMENTS.

FOR SALE, twelve dozen good sections, 8s. dozen, and twelve dozen second grade (weight 14oz. and 15oz.), 6s. 6d. dozen; also 1 cwt. good medium coloured extracted honey, 56s.—R. METCALFE, Ebberton, Snainton, Yorks. v 11

DOZEN strong stocks, in good bar frame hives, combs, &c., for sale, 25s. each; extractor, cog-gearing, fair condition, 10s.; large extractor, on wooden stand, cog-gearing, 10s.; few empty hives. —THOMAS, Oakley House, Combridge, Glamorganshire. v 2

FOR SALE, several stocks of bees, 1914 Italian queens, accept best reasonable offer. —C. ASHWORTH, Heytesbury, Wilts. v 1

LIGHT HONEY, 16oz. screw cap jars, fine flavour, very thick, graded, 10s. and 8s. 6d. per dozen; 1lb. sample jars, 1s.—THOS. CORNEY, Ramsey St. Mary's, Huntingdon. v 7

7 CWT. Scotch clover honey; sample, 2d.—T. RULE, Summervale, Annan, Dumfries-shire. v 5

REWARD 10s. offered anyone informing advertiser of cottage to let, November; 3 or 4 apartments, large garden or land; suitable locality for apiary, Edinburgh district, with train or car arriving Edinburgh not later 7.30 a.m.; rent, taxes not over £20.—ARCHIBALD MacINTYRE, Orielplace, Roxburgh-street, Grangemouth. v 4

DRIVEN bees, including package, 6s. 6d.; queens, 2s. 6d., letters.—APIARIST, Terrick, Kington, Worcester. v 3

W.B.C. HIVES, good condition, 6s. 6d. each; selling through bereavement.—MRS. OWEN, Risby, Bury St. Edmunds. v 78

QUEENS.—Surplus 1915 fertiles, selected blacks, 5s. 6d.—REV. W. E. MATTINSON (1st class expert), Horsey Vicarage, Gt. Yarmouth. v 9

EXPERT would undertake tour; experienced; references.—EXPERT, "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 89

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR DRIVEN BEES.—Rapid feeders, Canadian, to take 10lb. syrup, 2s. 6d. each; a gross dovetailed Standard frames, 10s.; two dozen bottle feeders, 1s. each; Porter bee escapes, 1s. 6d. each; slotted separators, 6d. dozen; drawn out shallow frames, 4s. 6d. dozen.—Box 10, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

COMB HONEY, clean, white, well filled, early honey sections.—BLANKLEY, Honey Cottage, Denton, Grantham. v 64

FOR SALE, shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

TWO stone tins of light honey for sale, 1915.—W. B. ALLISTER, Throckenholt, Wisbech. v 8

1915 VIGOROUS fertile queens, 5s., healthy; safe arrival guaranteed.—TOLLINGTON, Woodbine Apiary, Hathern. v 6

NATIVE QUEENS, 1915, healthy, 4s. each. Nuclei, 5 framed.—HUNT, Westmoors, Dorset. v 87

VIGOROUS, prolific queens. Virgins, 2s. 6d.; mated, 4s.—MUNRO, 13, Bank Avenue, Dundee. v 81

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d. post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 41

HEALTHY driven bees, 1s. 6d. 1lb, or 5s. lot, boxes returnable; also first grade season's for sale, cash or deposit.—G. LEWIN, Molesworth, Hunts.

VIGOROUS, prolific queens, Virgins, 2s. 6d.; Mated, 4s.—MUNRO, 13, Bank-avenue. Dundee. v 81

HEALTHY driven bees, with queen, commencing August 2nd, 5s. per lot; boxes returnable; orders in rotation; cash with order.—T. PULLEN, Ramsbury, Hungerford. v 66

SECTION Glazing, lace paper strips, 7d. per 100; lace bands, 3in., 1s. 3d. per 100, post free; good section racks, slotted dividers, followen and wedge, complete, 1s. 6d., as new; also section racks, complete, 1s. 3d. each.—W. WOODLEY, Beedon, Newbury.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the names and addresses, together with the regiment and rank, of any bee-keeper serving his King and Country; also if killed or wounded.

ESSAY WRITING ON BEE-KEEPING.

We have pleasure in giving this week some of the prize essays in the competition promoted by the St. Albans and District B.K.A., and also a copy of the note which was sent to the head teachers in the various council schools. We have not space to give all the essays which received prizes. They are all well written, and most of them are also illustrated by excellent drawings and sketches, some of these being beautifully coloured. They all reflect great credit on both the competitors and their teachers.

ST. ALBANS AND DISTRICT BEE-KEEPERS' ASSOCIATION.

May 18th, 1915.

DEAR SIR or MADAM,—In connection with the exhibition of honey, &c., of the St. Albans and District Bee-Keepers' Association, which will be held on July 14th, 1915, at Aldenham Park, in conjunction with the Show of the Elstree and Boreham Wood Horticultural Society, prizes and certificates are offered to pupils in the first and second classes (or others at the option of the teacher) in the elementary schools for essays on "The Honey Bee and its Home," the essay not to exceed 200 words.

The object is to interest children in the subject of bee-keeping. If you will bring this to the notice of pupils under your charge, and if possible, perhaps, give them a lesson or two on the subject, you would greatly help in the work.

Each essay should be written on one side of the paper only, and should give the child's name, class, age, and school, and must be sent to me not later than Wednesday, June 30th, 1915.

Any further information will be gladly given by

Yours faithfully,

E. WATSON, *Hon. Sec.*

The awards offered are:

For the best Essay: A gunmetal watch.
For the next 24: Book prizes.
For the next 12: Certificates.

The following is the first prize essay, written by Nellie Dewhurst:—

THE HONEY BEE AND ITS HOME.

Amongst the toilers of the insect world is the honey bee. There are three kinds of bees—the queen, drone, and worker.

Wonderful as all the parts of the honey bee are, there are none so wonderful as the antennæ. They are used for smelling, and strange to say the ears of the bee are situated in them.

The hives of the honey bee are sometimes made of straw, but the most modern types are constructed of wood, painted white, and are very much like the houses we live in, being three storeys high.

When a honey bee alights on a flower she dips her tongue down the nectaries and collects the nectar. She visits flower after flower until her honey-bag is full, and then returns to the hive. Whilst she flies a change takes place in the honey-bag. The cane sugar is converted into grape sugar, and the nectar is strained to separate the pollen. This is how honey is formed, and it is good for us, because the honey bee partly digests it.

There are many qualities of honey, but the best of all is that which is produced from white clover.

AN ESSAY BY DOROTHY JENNINGS.

THE HONEY BEE AND ITS HOME.

There is estimated to be about 2,000 different species of bees, 200 being found in Great Britain. The industry of bees is a splendid example of what can be achieved by union. One bee can do comparatively little, but hundreds united accomplish wonders. These extremely interesting insects have been studied more than other insects.

The queen is the supreme sovereign and mother of the hive, and has the largest body although the smallest wings. Drones are indolent but pretty, having the largest wings and no stings. Workers are the smallest and busiest of the community, all having certain work allotted to them. Some are employed in collecting pollen and others accumulate nectar, from which honey is produced.

When a bee's tongue is thrust into the nectaries of flowers the small honey sac

at the extremity is filled with nectar. This undergoes a change while carried by the bee, and the cane sugar in the nectar is turned into digestible grape sugar. At length the hexagonal cells of the comb receive the honey.

Honey elaborated from different flowers varies in flavour; heather, lime-tree, and clover honey being considered choicest.

Old-fashioned hives are thatched, but modern ones are wooden.

AN ESSAY BY ANNIE LYALL.

THE HONEY BEE AND ITS HOME.

Honey forms a very delicious addition to our tea-tables, so why should we not think of the little insects who produce it so wonderfully?

There are three kinds of bees, the female or queen, the worker, and the drone. The honey bee is most industrious. Its hind legs are longer than the other pairs, and present, on the exterior, a triangular shape surrounded by stiff hairs, forming the border of a sort of basket in which the insect carries the pollen of the flowers.

Honey is made from the nectar of flowers, and stored in cells constructed by the bees. It is gathered from many kinds of flowers, each one having a different quality.

The modern hive is three storeys high, the top storey being used in case of rain entering the woodwork. It is usually painted white. All the cells are built of wax, and they are constructed in wooden frames, placed there by the bee-keeper for the purpose.

Swarms of bees are very interesting to watch, and, if wishing to lodge them in a hive, one's face must be protected by a veil. A good swarm weighs from four to six pounds.

AN ESSAY BY FLORRIE VASS.

THE HONEY BEE AND ITS HOME.

The honey bee reminds us of sweet flowers and sunny skies, and what can be more pleasant to hear than the humming of its wings on a bright summer's day?

The home of these hard-working, persevering insects is the hive, and the mistress of this palace is the queen bee.

Next in rank comes the worker bee, which truly deserves its name, for it is constantly employed in gathering the nectar from the flowers, building the combs, and feeding the drones.

The drones are the lazy bees, who, with the exception of assisting to keep up the temperature of the hive, lead a comparatively idle life, and generally at the end of the honey season are killed.

The honey-comb is made by the energetic bees from a substance known as wax. The little wax cells are hexagonal in shape.

The hives are of different shapes and sizes. The old-fashioned hive, that is the one which is made of straw, has lately been superseded by the white wooden one, which is three storeys high. The upper storey is generally empty, the middle section is used as a storage, while the lower one is the general living room.

FAULTS IN SECTIONS.

By D. M. Macdonald, Banff.

Folding Sections.—Generally the bee-keeper and not the bees is responsible for faults. Very frequently the wood of the one-piece section becomes hard and brittle. This fault being brought about because the case has been kept in too dry an atmosphere. A zinc-covered shed on which the sun shines all day long is a fruitful source of this trouble. Snap goes one and then another of the V cuts when folding, until the sorely tried temper reaches the boiling point, and that does not lessen the trouble! The cure is damping the sections at the points where the folding over takes place. Beware, however, that this is not overdone, as then you produce almost as great an evil, for the sections decline to fold square or at all satisfactorily. I gave this advice lately to a novice, and he held the sections for five or ten minutes below the tap. Consequently, the wood got swelled up so much that the work had to be temporarily abandoned. A jug with a narrow mouth allows a tiny stream to be trickled down at the V cut in such a way that only that point is damped, not saturated, and then the section can be folded with ease and accuracy. I have before advised that the parcels should be covered up with a piece of damp blanket. This, if carefully done, acts perfectly when the parcel is left overnight and the folding done next day. Lately I have tried taking the sections in lots of twenty-one and bringing the folding point in front of a stream of steam from the spout of a boiling kettle. Don't overdo even the steam. In each case care must be taken not to carry the moistening to excess. The wood is so pure

a white that it is easily stained, thus taking from the beauty of a choice article.

After trying various blocks for folding sections I have gone back to simple hand work. More speed can be attained by following this method, and I think as great accuracy can be secured. Section racks should be put together perfectly square, and if they are so, a hand-folded section is brought to the plumb, even although it leaves the folder with a slight bias.

Many sections fall into second grade from various causes depending on the foundation starters, amongst them being the following: Foundation may be too soft, and therefore in handling it twists and buckles. On the other hand, it may be too hard, so that even when pressure is brought to bear on it the sheet springs back to a slant on the line of the cut in top. At times the sheet yields and wholly or partly falls from its fixture. Any departure from the perpendicular tends to make the bees brace one or both faces to the divider. Any careless spacing produces a fat or a lean side. The want of dividers makes packing for market almost, if not wholly, impossible. I would advocate the use of these spacers in every rack put on a hive.

Handling Racks.—From the foregoing it will be seen that faulty sections are not generally caused by the bees, but brought about by the carelessness or negligence of the bee-keeper. It is marvellous how inconsiderate many, even successful, apiarists are in the treatment of their section racks. They leave the full ones lying about in all sorts of positions, they carry them to the apiary sloping, or even standing on one side or end, and very often stand them up in this latter position, or leaning to the side of the hive, often for some considerable time, and at times exposed to a hot sun—with a consequent chance, or almost certainty, of disaster.

Racks should not be left on too long after being cleared of the bees, and, while being cleared, attention should be given to certify that things are in working order, otherwise pinholes will be found in cappings, and occasionally bees may nibble and destroy a good many cells. Don't afford outsiders an opportunity of intruding, otherwise there may be war, and certainly honey will disappear quickly.

Home-made racks are a fertile source of faulty sections. They themselves are generally faulty in the following respects: The walls are either too scant a $4\frac{1}{4}$in. in depth, thus allowing the weight of the second rack above to press on the wood of the sections, or they are too full, and so permit of propolis being deposited and burr combs being built between the two racks. They are as often either scant in space, both in length and breadth of inner dimensions, or too full—all from being defects telling on state of perfection, or the lack of it, in the finish of this best specimen of our honey product. Almost invariably the amateur makes his rests too deep. There being more than a bee space thus afforded above frames or between racks, the bees, following a natural law, will certainly attempt to correct the error by building comb and trying to store honey. I often feel sad at this waste of bee labour, while the daub resulting, and the unnecessary and profitless task of the bee-keeper in cleaning up would often try the temper of even a relation of Job.

Wedging up the sections in the rack until the whole is nearly a solid makes the group more nearly perfect, but care must be taken that the rows are easily separated as well as the individual sections when the whole is completed. Emptying a rack is often a fruitful means of creating faulty sections. Fingers should never be poked into the face of nicely completed honey, while force in the form of a chisel inserted to wrench up a section is bad policy. Introduce two blocks, one inch square, below the spaces between rests. Push the rack down, and the whole twenty-one sections are raised in the mass. Handling the finished article should be avoided as much as possible, and, when necessary, it should be done on a system which prevents the points of finger and thumb from touching the comb.

SUFFOLK BEE-KEEPERS' ASSOCIATION.

The success of a county or district bee-keepers' association depends to a great extent on the members themselves; but there is not the slightest doubt that the really essential factor in securing success is an energetic secretary, and if the varying fortunes of different associations are studied it will be found that they have almost always synchronised with a change of secretary. Fortunately, a number of our associations are served by secretaries who work with the single purpose of helping their association to promote bee-keeping on modern and humane lines; the small honorarium they receive being by no means adequate payment for the time and trouble entailed. The Suffolk B.K.A. is one of those fortunate enough to have a hard-working secretary, and we print below one of the monthly reports that are sent out to each member. Mr. Jones has also, during the last year, collected a

great amount of honey for our wounded heroes, and we have no doubt his and all other similar appeals will meet with a hearty response from bee-keepers all over the country now that the bulk of this year's honey has been secured.

SUFFOLK BEE-KEEPERS' ASSOCIATION.

Lord Stradbroke, President.

DEAR SIR or MADAM,—Working under difficulties owing to war, spring visits by experts have been well carried out. In one or two instances where double duty was imperative, one or two valuable members could not be reached; to these our sincere regret.

Others, badly hit by "Isle of Wight" disease, have had extra attention in all directions; others whose stocks had been wiped out have started again with Italian or Dutch bees.

On the principle that every one is a benefactor who can grow two blades of grass where one formerly grew, we desire all members to persevere and enlarge apiaries and secure larger surplus for lean years which may follow the war.

Bee-keeping is fascinating in greatest measure to those who personally manipulate stocks; some of our best apiarists are ladies. Now, please study all stocks during Bank Holiday throughout the county; if any affected, remove to isolated place and treat, re-queen, or destroy lest others follow.

Monthly meetings first Tuesday, 7.30: Museum Street, Ipswich; all welcome. Committee meeting, 7 o'clock, August 3rd, to consider autumn work. Please take notice.

We are doing all in our power to promote hobby.

Third Class Examination, July 30th, by W. Herrod-Hempsall, Esq., F.E.S.: 12 candidates. Then to advertise the association, we have new Suffolk labels, very pretty, 1s. per 100.

In conclusion, we are renewing our request for surplus honey for the brave wounded soldiers. Can you spare a trifle to address as under?

Please do your utmost to keep stocks healthy and strong.

Believe me,

Yours very sincerely,

OLIVER C. JONES, *Hon. Sec.*

Lattice Barn, Ipswich.

BRIDGNORTH AND DISTRICT BEE-KEEPERS' ASSOCIATION.

This flourishing association held its annual exhibition in connection with the Hampton Loade Horticultural Society on August 3rd. The total number of entries for honey, wax, and cake was seventy-five. The quality of honey exhibited was exceptionally good, thus giving the judge a difficult task to decide which was first, the competition being so keen. The Rev. G. E. H. Pratt, first class expert of the B.B.K.A., was the adjudicator, and made the following awards:—

Open Class, 6 Sections of Comb Honey, 3 entries: 1st, R. H. Elson, Wellington, Salop; 2nd, W. Shuker. 6 Jars of Run or Extracted Honey, 7 entries: 1st, W. Shuker; 2nd, J. S. Lawton; 3rd, R. H. Elson.

Open Gift Class; one jar, to be sold by Association; 15 entries: 1st, W. Shuker; 2nd, J. S. Lawton; 3rd, J. Gladding Bingfield, Corbridge-on-Tyne, Northumberland.

Open Gift Section, to be given to wounded soldiers; 13 entries: 1st, H. Hulme; 2nd, R. Hall; 3rd, W. Shuker.

Members' Gift Jar; 6 entries: 1st, J. S. Lawton; 2nd, W. Shuker; 3rd, H. Hulme.

3 Sections of Comb Honey: 1st, R. Hall; 2nd, W. Shuker; 3rd, M. A. Burrows.

3 Jars Run or Extracted Light; 8 entries: 1st, J. S. Lawton; 2nd, W. Shuker; 3rd, H. Hulme.

3 Jars Medium Colour or Dark; 3 entries: 1st, W. Shuker; 2nd, H. Hulme; 3rd, A. Edge.

3 Jars Granulated; 5 entries: 1st, W. Shuker; 2nd, H. Hulme; 3rd, M. A. Burrows.

Members who had never won a Prize: 1st, R. Hall.

Honey Trophy, not to exceed 100lbs.: 1st, H. Hulme; 2nd, W. Shuker.

Beeswax, not less than 4ozs.; 5 entries: 1st, W. Shuker; 2nd, H. Hulme; 3rd, A. Edge.

Honey Cake, made by Member's Wife, Daughter, or Sister; 5 entries: 1st, R. Hall; 2nd, H. Hulme.

The committee again appreciate the services of the "B.B.J." in advertising the show far and wide, for it brought entries from Wellington, Salop, Doncaster, Northumberland, Cheltenham, Rotherham, Shirebrook, and Kidderminster.

The committee take this opportunity to thank all who have contributed to the Gift Classes, thus helping to make the show a success.—J. S. LAWTON, *Hon. Sec.*

BLYTHE BRIDGE SHOW.

The sixth annual exhibition promoted by the Blythe Bridge Agricultural and Horticultural Society was held in the picturesque and exceedingly convenient grounds of Blythe House on Wednesday, and was in every way a success. In-

augurated with the idea of fostering the horticultural and poultry-keeping arts in the immediate district, the show has during the course of its comparatively brief career made splendid progress. Not only has it developed considerably in the matter of size, but, thanks to the generous support which it has received from all sections of the local community, it has been able to add year by year to its attractiveness. Those responsible for its management have undoubtedly shown themselves to be imbued with a truly progressive spirit, for not only have they been ready to take full advantage of the opportunities for development as they have occurred, but they have been nothing loth to take risks in their endeavour to render the show as attractive as possible.

In the main, the weather was favourable to the success of the exhibition, which attracted a large attendance of visitors from the surrounding countryside and the Potteries. With a patriotism which is commendable, the committee decided to hand over the profits after the payment of working expenses to the fund which is being raised in the district for the care of the wounded soldiers, while during the course of the proceedings a jumble sale on behalf of the Red Cross Society was conducted by Mr. W. G. Hart, and resulted in a substantial sum being realised.

There was a capital show of honey. Mr. B. T. Abel, of Stallington, was the most successful exhibitor, obtaining the silver medal of the Staffordshire Bee-keepers' Association with 18 points; Mr. Collis, of Uttoxeter, winning the bronze medal with 13 points. The former had on view in the observatory section an exhibit showing the working of a bee-hive from the foundation stage to the complete product of sealed honey. This was closely inspected by visitors, who evidently were very much interested in the process. He also exhibited figures of the King, General French, and Lord Kitchener, well modelled in wax.

Mr. E. Eaton, of Sandbach, officiated as judge, and made the following awards:—

Honey.

OPEN CLASSES.

Light Honey: 1, T. Cooper, Leigh; 2, W. Collis, Gratwich; 3, B. Abel, Stallington. Comb Honey: 1, W. Collis; 2, E. Stanyer; 3, B. Abel. Dark Honey: 1, W. Collis; 2, B. Abel; 3, J. Kendrick, Stone. Medium Honey: 1, W. Collis; 2, E. Stanyer; 3, B. Abel. Granulated: 1, B. Abel; 2, W. Collis; 3, A. T. Salt, Mickleover. Frame of Comb Honey for Extracting: 1, B. T. Abel; 2, E. Stanyer. Specimen of Bees in Observatory Hive: 1, B. T. Abel; 2, T. Salt. Beeswax: 1, B. T. Abel; 2, E. Baggeley, Wootten; 3, E. Stanyer.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

WHO IS RIGHT? (page 277).

[9169] He would be a courageous person who would claim to approach anything like the exalted edifice, set forth in our title in all matters pertaining to our craft.

I have no brief for the Journal other than that I have found it a most useful help, by comparing Queries and Replies, to say nothing of the tips that continually come through its pages by regular perusal. But as the Journal solicits and welcomes differences of opinion on any topic relating to bee-keeping, I think it can hardly be lacking in courage if it fails to find complete agreement on any one, and that, too, a topic which most of the "British bee-keepers" have left severely alone. I refer to queen breeding on a scientific basis, and, obviously, no one man can successfully attack the problem. Age is certainly a factor for results in work.

It seems to me that when a colony is at its prime, and doing the particular work we want it for, that is the time to think of increase, or queen breeding, which our modern hive so favourably lends itself to; but if we breed season after season from one strain, it seems logical to expect our object at some time to be thwarted. This brings us to constitution. Whether we can lay this dire disease to constitution or not, I won't here claim to know anything about, but it does not need much intelligence to understand that the properly bred bee has the best chance of resisting disease, from whatever cause. If disease is present, why not call in state aid to combat it, when it is proved that there are so many careless and ignorant people about whose apiaries are disease

centres? And we might thereby make some effort to help, as the particular exigencies of the case might need, with proper and qualified assistance.

I don't quite agree that it is arrant rubbish because one does not agree as to the proper breeding age; this alone will not allay disease. Again, for the reason stated above it is possible to have a perfect strain, which yet may be contaminated with disease at some time

If Mr. Campbell is an old reader of the JOURNAL and has kept his copies he will find notes and experiences, with ample explanation of the method of attack of this disease—in fact, nearly everything that he is asking for. So I think we must not blame the few people who run the JOURNAL, but rather that we have not made use of it, or, what is still more likely, we are not sufficiently self-reliant to try and find out things for ourselves. And once more I plead for "Local Committees," with workers who will associate to really assist bee-keeping and not be content with an annual show, which, after all, is but very little credit to us, involving much work on the few willing workers or managers of our associations. This is where we must start if we are not satisfied with our present progress; we can get at these problems then. —A. H. HAMSHAR.

NOTE.—By attacking the problem of queen-rearing I mean to benefit the whole race.

WEATHER REPORT.

WESTBOURNE, SURREY.

July, 1915.

Rainfall, 3.32in.
Above aver., .98in.
Heaviest fall, 1.02in, on 16th.
Rain fell on 16 days.
Sunshine, 221.1 hrs.
Below aver., 6.8 hrs.
Brightest day, 30th, 13.8 hrs.
Sunless days, 2.
Maximum Temperature, 76, on 3rd and 4th.
Minimum Temperature, 41, on 13th.
Minimum on grass, 27, on 13th.
Frosty nights, 0.
Mean maximum, 65.5.
Mean minimum, 51.5.
Mean temperature, 58.5.
Below aver., 2.5.
Maximum barometer, 30.295, on 2nd.
Minimum barometer, 29.387, on 17th.

L. B. BIRKETT.

"Use time in time
While time lasts,
For time is no time
When time is past."

PRESS CUTTING.

THE BEE-KEEPER.

We made his acquaintance one day quite as a matter of chance, and later discovered that he was a devotee of bee-keeping, not so much from the standpoint of profit as of fancy. He was a gardener by occupation —a clever one, too, most of the villagers admitted, for he always managed to secure a fair portion of the prizes at the autumn show—but, although he still spent a few hours each day looking after the premises of an old gentlewoman, most of his time was taken up pottering around a little old-fashioned garden of his own. This garden was a good bit removed from the village, not far from the main road; and one spring day as we passed there came from behind the high wall a strange variety of noises: high-pitched ejaculations, rough tramplings over bushes, and resounding whacks like those of a stout stick upon a sturdy back. It seemed impertinent to clamber upon the wall, and it also seemed ungallant to pass with stopped ears; so we steered a middle course, making our way to a small gate inserted in the wall off the road. First a cautious peep was taken, but that elicited nothing, because a thick privet hedge obscured the view of that portion of the garden where the turmoil raged. Then we became bolder, silently entered the gateway, and cautiously proceeded down through several archways of twisted trellis-work meant for the better upbringing of rose bushes, until we came upon a rather laughable sight. There was a gardener, a bright-complexioned man well up in years, and wearing on his head a scarlet cowl, doing his utmost to forcibly evict an errant sheep from his trim and well-stocked premises. Bit by bit he would get the animal near to a large gate opening on a field, but almost in a trice his labour would be lost, for instead of noticing this exit it would charge past him. His stout cudgel then came into play, and after he had turned his visitor the struggle commenced all over again. Now was the time to proffer our services, which were accepted with a little surprise; and soon he had the pleasure of bolting the gate on the stravaging sheep. But it took him a good half-hour before he calmed down, and was in a fit and proper condition to estimate the damage done to his trim walks and flower beds.

BEE FLOWERS.

The bee-keeper had a house somewhere else in the village; but whenever spring was well assured he shut it up and "flitted," to use his own words, into his summer house, "to be alongside the bees and the flowers." This we learned after-

wards, for we met him on another occasion early in June, and he made us free of the garden to have a look through. It was easy to see, as we conversed, that the bees were much to him, and as you will get a man's best when you talk about something dear to him, you may depend we were interested in the four little straw hives nestling under the wall, and facing the south. The bee-keeper could tell where his bees got most of their supplies, and how far off they would fly for sweets. In his own garden he planted crocuses and beds of mignonette; while a number of fine apple trees rendered their branches of blossom for scrutiny in early May. Then there were the surrounding fields of clover and beans, for the bee is a roamer; the lime avenues and the chestnut trees, for it flies high when good things may be found there; and as far away into the world as the heather moor, above the village, for distance is not to be feared. Add to this abundance the patches of yellow charlock among the growing corn, the wayside flowers without number, and even the whin blossoms, and you have a fair idea of the scope of a honey bee's travelling. "I have seen them, too, settling on the hawthorn leaves," he said, as a finish to the list of flowers, "for the honey dew that gathers there when the weather is warm." But on being delicately questioned as to what this honey dew is or how it is caused he could not tell, "except that maybe it is left by the overladen humble bees when they settle there." Perhaps he is right; still, that was the only one expression of doubt which we ever heard him voice. On the subjects of swarming and feeding and breeding it could be seen he was convinced that he knew all that was worth knowing.

(To be continued.)

REMEDIES FOR STINGS.

(Continued from page 281.)

A QUASSIA LOTION.

Persons who object to powerful odours will do well to adopt the quassia lotion; this has no scent, and causes no irritation to the skin, no matter how often it is applied, which is more than can be said for some preventives. Eucalyptus is distinctly objectionable to winged plagues; the odour of it is likewise much disliked by many persons, but when this alternative is presented, bites, or immunity from bites at the expense of the olfactories, I imagine we shall wisely choose the lesser annoyance. A little eucalyptus oil poured on water, mixing it quickly and applying it with flannel or a sponge, is very effectual; even better is the rubbing in of the pure oil immediately after washing. A dust of toilet powder will remove all trace of grease.

Yet another protective agent credited with great virtue consists of the following ingredients:—To an eight-ounce bottle three-parts full of deodorised paraffin—such as is used for hairdressing—add sufficient crushed camphor to fill it; well shake the bottle, and in a few days the camphor is incorporated with the paraffin. This mixture should be sponged over neck, wrists, and ankles. Persons who suffered terribly from insect pests in other years say that after using this lotion during the hot weather they were and are free from the intolerable irritation that follows the punctures of our sworn tormentors. Oil of eucalyptus and creosote, of each five drops, well mixed with an ounce of glycerine, is a very great protection against gnat bites, but the odour of creosote is very powerful, and for that reason its aid may be refused.

WASP AND BEE STINGS.

Wasps and bees are greatly dreaded by some persons, and we all dislike the idea of being stung; albeit, the pain is not great after all, and the danger, except in rare cases, nil. It is not generally known that the drug ipecacuanha is a sovereign remedy for the stings of wasps and bees. A physician says that an application of oil of cinnamon, applied with a straw or a brush, is the very best of all cures for bee stings; it will blister slightly, but it will destroy the poison. A homely, but efficacious, corrective of the poison from wasp stings is the juice of an onion; this remedy is nearly always at hand. The wasp—a most irritable insect—greatly objects to the odour of turpentine; a little of the spirit sponged over the framework of windows will repel the entrance of wasps from the outside. Here is one more to add to my lists of remedies for and preventives of the bites of poisonous insects: Bathe the punctured part with chloroform, and the pain and inflammation will subside almost immediately. Animals are fellow-sufferers with us from insect tormentors; many serious accidents have resulted from their attack on horses in harness, driven mad by gadflies and similar vampires. I am told that a drop or so of oil of juniper put in each of the animal's ears will keep off flies and give great comfort. A decoction of walnut leaves sponged over horses and cows where usually assaulted will, it is said, also drive flies away. A little paraffin put in the water used to wash windows will prevent houseflies making the glass dirty.—From the *Newcastle Daily Chronicle*.

[In respect to the foregoing we have received the following note from Mr.

Brown, chemist, Bearwood, and we quite agree with what he says.—EDS.]

If any of your readers adopt the advice given on page 281, current issue, they will find the remedy worse than the disease, or rather that the prevention will be decidedly worse than the cure. I refer to the deterrent consisting of 1 part of alcohol to 9 parts of carbolic acid.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

UTILISING LATE SWARMS.

[9023] I enclose a bee which was brought out by about a dozen other bees from a newly-hived swarm. Is it a young princess?

I should also thank you for advice on the following: It is the practice with many about here in the case of late swarms which are not wanted, and if uncertain from which hive they come, to throw down a few bees at each hive. I did this, and at some hives found hundreds of dead bees next morning. At other hives they seemed to get in all right, for not one dead bee was found. At one somewhat weak stock the dead were thickest. At another hive where I dropped no bees there were a number of dead—being driven from other hives they tried this one. It seems to me a bad practice, for no bee-keeper likes to see his bees killed in this way. It is cruel, and I think better, and perhaps more profitable, to let them go. Many bee-keepers come home late, and have no time to examine hives to discover where a swarm has left.

H. J. H.

REPLY.—The bee was a virgin queen. The practice described is a very bad one. The bees might be united to a weak colony in the same manner as driven bees, with practically no loss of bee life, or if drawn out combs on which to hive them are available they would make another stock.

BEES REFUSING TO WORK IN SECTIONS.

[9024] I am again troubling you with my little worries and difficulties, but knowing your sympathies are extended toward those who are anxious to improve their knowledge in bee culture, I am bold to ask your advice.

About a month ago I was presented with a hive of bees which are in a garden about a quarter of a mile from my house, and which had been neglected for three or four years. Upon opening the hive I found on the top of the brood chamber a Canadian rapid feeder all filled up with comb and honey and stuck pretty fast to the top of the frames. All the coverings were also fastened on the exposed frames, and I had to use great force to get them free. After cleaning all away from the tops of the frames I put on a queen excluder and a rack of sections, but found after a fortnight or so that the bees would not take to the sections. I therefore put in their place a box of shallow frames that I had just extracted honey from. I found in a week's time that some of the bees had gone up, but on looking yesterday I found very little honey in the super, and the bees not going up strong as they should; the only reason that I can see is that there is a space of about 1½ inches between the tops of the frames and the excluder (which is a "Wilkes") although they have built some comb just in the centre, which acts as a sort of ladder for them.

The bees are fairly strong in the brood chamber, although it seems bunged up with comb and honey. I am told that a strong swarm left the hive early in the summer, and two small casts since, the last one since the bees were given to me. This lot I managed to put in with a weak lot that I had, which I wrote to you about a short time ago, and which I think are doing all right, as I find there is now a lot of brood in the cells.

The one difficulty about the hive is that it is an old pattern one. There is no separate box and outer case the same as the W.B.C., so the frames are fixed in the one case, which constitutes the body of the hive. Shall be glad to know what is best to do so as to get a little honey this season if possible.

I presume it would not be safe to move them to my own place until the autumn.

I am sending a sample of this season's honey, which I have had much difficulty in straining, as the muslin had to be changed so often. It seems much thicker and heavier than what I had last year, so shall be glad of your opinion. I have bottled 82lbs. of honey from three racks

of supers—twenty-four shallow frames. Do you consider this a fair average?

D. W. Havard.

Reply.—The excessive swarming is the reason the bees have not worked in the supers. The distance between queen excluder and tops of frames is too great. If the excluder is raised at all, a quarter of an inch is sufficient. We prefer to lay it close down on the top bars. If the bees are strong enough to work in supers you will find the 1½in. space between excluder and frames filled with comb and honey. The bees are not likely to give any surplus this season. If the young queen is laying it would probably be an advantage to remove the super and also take out a couple of combs of honey from the brood box and put frames fitted with foundation in their place.

As the hive is so short a distance away do not move it to your own garden until the bees have been confined for a week or more by cold weather.

The honey is mainly clover, with some tree honey. The difficulty in straining was caused by slight granulation. If you had heated it sufficiently to clear it you would have had no trouble. Is is a fair average.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

W. F. Jones (Anglesea).—No. 1, heather (*Calluna vulgaris*). No. 2, Bell heather (*Erica cinerea*).

F. Nicholls (Peterboro').—The old queen would be lost when the swarm issued the first time. The bees have evidently swarmed again (probably more than once) with a young queen.

Grateful (Ross-shire).—The queens have been chilled.

Woodno (Ross-shire).—It depends on the weather. If it is favourable they will mate.

Bee-Keeper (Cheshunt).—They are a cross between natives and Ligurians. They are more vigorous than natives—at robbing.

W. Jones Brown (Middleton).—It is not possible to give a definite answer to some of your queries, as conditions and circumstances vary so much. (1) From three to four thousand. (2) (*a*) It is advisable to do so at times; for instance, if the brood combs are choked with honey, thus limiting the cells available for brood-rearing. (*b*) It is not advisable. (3) Do not pull the brood nest to pieces more than you can help, and only when you have some definite object in view, not just to see how the bees are getting on—turning back the quilt will show you that. (4) If no honey is coming in the syrup will be used for the brood, otherwise it will be stored. (5) Better remove the sections. (6) Yes, but see that there is a divider on each side of the sections. (7) Pollen is not sealed over unless a small portion is placed in the bottom of a cell and covered with honey. (8) We prefer to do so. (9) Not less than 3lbs. or 4lbs. (fifteen to twenty thousand), the more the better. (10) No, use a "Rapid" feeder.

Honey Samples.

M. M. (Mansfield).—The honey is spoiled by honeydew, which gives it the dark greenish colour. It is worth 3d. or 4d. per lb. in bulk. In future please do not place a letter next to the bottle. There was no cork wad in the cap and the honey had leaked out and saturated the letter, which we have had the greatest difficulty in deciphering, in addition to being extremely messy. Will other readers please note!

"Radnorian" (Presteign).—The samples are practically both alike—clover honey of good quality; from 1s. to 1s. 2d. per lb. bottle.

Suspected Disease.

"Soldier" (Hants).—The bees have been suffering from "Isle of Wight" disease.

"Fifeshire."—It is "Isle of Wight" disease. You omitted name and address. See heading to this column.

J. H. (Lye).—The bees are suffering from "Isle of Wight" disease.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

Monday and Tuesday, August 16th and 17th, 1915, at Cannock, Staffs.—Honey Show, in connection with the Horticultural Society's Show. Eight open classes. Schedules from J. Bird, F.R.H.S., Glenmay, Cannock.—**Entries closed.**

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, 10 cwt. light honey, price with sample; also first grade sections, lowest price.—COOK, Torwood, Ashford, Middlesex. v 13

FOR SALE, two healthy May swarms, on nine and seven frames, 2s. 6d. per frame, cash with order.—H. TURK, Rivers Corner, Sturminster Newton, Dorset v 14

HONEY.—Fifteen 14lb. tins, 7d. lb.; sample, 2d., splendid flavour.—CUTFORTH, hairdresser, Oakham, Rutland. v 19

DUTCH, surplus virgins, 2s. 6d.; mated (shortly), 5s 6d.; on six frames, 20s.—PAUL, Salisbury-road, Bexley. v 18

LIGHT HONEY, 16oz. screw cap jars, fine flavour, very thick, graded, 10s. and 8s. 6d. per dozen; 1lb. sample jars, 1s.—THOS. CORNEY, Ramsey St. Mary's, Huntingdon. v 7

WANTED, genuine Simmins's "Conqueror" hive, complete, perfect condition.—Full particulars to Box G., "B.B J." Office, 23, Bedford-street, Strand, W.C. v 17

A FEW good English, also hybrid, stocks of bees for sale, young prolific queens, ten frames, 15s.; eight frames, 21s.; f.o.r.; boxes returnable; several high quality 1915 queens (British), 3s. 6d. each; all healthy.—CROWE, Stawell, Bridgwater. v 15

OVER 100 wired frames of strong, healthy bees, with young prolific queens, full of brood and stores for sale in any size lots, 3s. per frame; f.o.r.; boxes returnable, or 4s. 6d. each extra; cash or deposit.—JOHNSTON, 9, Sunnyside-road, Ilford, Essex. v 21

FINEST English honey, 60s per cwt.; sample, 2d.—DUTTON, Terling, Essex. v 16

FOR SALE, several stocks of bees, 1914 Italian queens, accept best reasonable offer.—C. ASHWORTH, Heytesbury, Wilts. v 1

W.B.C. HIVES, good condition, 6s. 6d. each; selling through bereavement.—MRS. OWEN, Risby, Bury St. Edmunds. v 78

EXTRACTOR, Lee's, used once; equal new, 15s.—BARNES, Elmhurst, Bourdon-road, Anerley. v 22

REWARD 10s. offered anyone informing advertiser of cottage to let, November; 3 or 4 apartments, large garden or land; suitable locality for apiary, Edinburgh district, with train or car arriving Edinburgh not later 7.30 a.m.; rent, taxes not over £20.—ARCHIBALD MacINTYRE, Orielplace, Roxburgh-street, Grangemouth. v 4

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth edltions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR DRIVEN BEES.—Rapid feeders, Canadian, to take 10lb. syrup, 2s. 6d. each; a gross dovetailed Standard frames, 10s.; two dozen bottle feeders, 1s. each; Porter bee escapes, 1s. 6d. each; slotted separators, 6d. dozen; drawn out shallow frames, 4s. 6d. dozen.—Box 10, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

CHOICE PROLIFIC ENGLISH QUEENS, 1915, selected and tested, bred from non-swarming stocks, 5s. 6d. each; safe arrival guaranteed; 12th year.—ARTHUR H. WILKES, Four Oaks.

HEALTHY driven bees, 1s. 6d. lb, or 5s. lot, boxes returnable; also first grade sections for sale, cash or deposit.—G. LEWIN, Molesworth, Hunts.

STRONG, healthy driven bees for sale, 5s. 6d. per lot; August delivery.—Apply, JAMES PITTS, Honeybourne, Worcestershire. v 12

DRIVEN BEES, including package, 6s. 6d.; queens, 2s. 6d.—Letters, APIARIST, Terrick Kington, Worcester.

1LB. Screw Top Bottles, 25s. per gross; August delivery. Orders in rotation; cash with order.—HILDRITT, 74, Navigation-street, Birmingham. v 23

PREVENT and Cure I.O.W. by using my Bee Tonic, increased vitality, 2s. 6d. post free.—A TROWSE, 51, Eade-road, Norwich. v 24

HEALTHY Driven Bees, with queen, 5s; strong lot boxes returnable.—MORETON, Bee Expert, Hallow, Worcester. v 25

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d. post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 41

VIGOROUS, prolific queens, Virgins, 2s. 6d.; Mated, 4s.—MUNRO, 13, Bank-avenue, Dundee. v 81

SECTION Glazing, lace paper strips, 7d. per 100; lace bands, 3in., 1s. 3d. per 100, post free; good section racks, slotted dividers, follower and wedge, complete, 1s. 6d., as new; also section racks, complete, 1s. 3d. each.—W. WOODLEY, Beedon, Newbury.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the names and addresses, together with the regiment and rank, of any bee-keeper serving his King and Country; also if killed or wounded.

M. MAETERLINCK AND THE WAR.

An old and valued correspondent at present on hospital duty at the front has from time to time given us an idea of the sort of work he is engaged in. Mr. T. B. Blow, who will be remembered by our older readers as one of the leading appliance manufacturers and a successful bee-keeper, and who after giving up his business resided in Japan, on the declaration of war joined the Red Cross, and has been doing useful work at the *Hôpital de L'Alliance*. We thought his letter would be specially interesting owing to his allusion to M. Maeterlinck, who is so well known as the author of that fascinating book, "The Life of the Bee." We are pleased that such a lucky chance has enabled Mr. Blow to be of real service to M. Maeterlinck.

Hôpital de L'Alliance.

Dear Mr. Cowan,—I was reminded of bee-keeping one day last week.

The Maeterlincks have a nice place about eight miles from here—the old Abbey of St. Wandrille—where they sometimes give plays, using the fine old cloisters as a setting. I heard quite by accident that the Maeterlincks and a party of their friends were stranded here at the station by reason of inability to get any conveyance to take them to St. Wandrille, so as I was free of any official work I at once placed myself and my car at their disposal and drove them to the Abbey, and fetched them back at evening. They were quite interested when they learnt I had been connected so closely with bee-keeping; they have some hives at the Abbey. I was very glad to be of service to them, as they and their artist friends have been very hard at work in getting relief for the Belgians and French in distress. Here only cars with military permits are allowed on the roads. My car has gone consistently well; it has traversed 8,063 miles of roads up to to-day, and has never had a stop other than for tyre punctures. Of course I have looked after it well, but it is the only car here with such a record, and all the other cars of our little fleet have cost from two to three times the price of mine, which is a 15-20 h.p. Studebakker, for which I gave £285. We have to work at all hours. Last week an emergency arose, and a car had to go to Rouen at 11 p.m. As no driver here speaks French except myself I had to go, for at night one has to stop and give a satisfactory account of oneself to the sentries on the road. I got there at 12.15 and was back at 1.30 a.m. I am glad to say I am well, though now chronically tired after my seven months' continuous work. I am shortly taking a little rest by going through Brittany, over the same ground that I went on a botanical trip forty years ago on foot, with my knapsack on my back, it then being my first visit to France. Kind regards to all friends.—Yours very faithfully, T. B. Blow.

THE GROCERS' EXHIBITION.

We have received a letter from the secretary to The Trades' Markets and Exhibitions, Ltd., to say that this year the Bakers' and Confectioners' and the Grocers' Exhibitions are to be incorporated, and held from September 4th to 11th. Under these circumstances they regret that it will not be possible to have any classes for honey.

We are sure that all bee-keepers along with ourselves will be disappointed at this announcement. It is a great pity that so many honey classes at shows have been dropped, in addition to the number of shows that have had to be abandoned altogether. It is especially unfortunate that the honey classes should be dropped at the Grocers' Exhibition, for many grocers—even those having large businesses—are wofully ignorant of the difference in quality of different honeys, and unscrupulous wholesalers appear to have no difficulty in foisting upon them the worst foreign rubbish as the finest product of some part of the British Isles. We hope that normal conditions will prevail ere another exhibition is due, and we shall again see the splendid show of honey usually associated with the Grocers' Exhibition.

THE IMPERIAL MARITIME LEAGUE.

FOUNDED TO SECURE THE MAINTENANCE OF BRITISH SEA-POWER, 27TH JANUARY, 1908.

"*God and my Country*" (Nelson's Last Words).

To the Editor of the B.B.J.

SIR,—The Imperial Maritime League from the very commencement of its Recruiting Campaign realised that working below the surface there was a strong pro-German and anti-British propaganda being carried on, and that sooner or later this would develop into an open organised movement to stop the war in the interest of Germany. The League has therefore utilised its campaign to exert quietly and steadily a counteracting influence. The following resolution for signatures was drawn up and has been extensively signed:—

"We, the undersigned, desire to place on record our unswerving determination to use all the possible means at our disposal to support the Governments of the Allied peoples in carrying on the war until peace has been restored by the unconditional surrender of the enemy, and thus for all time crush the arrogant military despotism of the German Empire, with which she is now seeking to dominate the world."

A resolution identical with this form has also been put at over 2,000 of the League's meetings. This has been passed practically unanimously, there having been so far only three dissentients to the resolution.

Now that the League's forecast has proved correct it is anxious to have this phase of its work more widely known, and we would ask all patriotic people to sign the petition and to induce their friends to do so. All who have the time to organise a house-to-house canvass in their own neighbourhood would be doing a patriotic service.

This letter will be sent to the Oversea Press in order that the movement may be an Empire and not merely a National one.

Forms can be obtained on application from the Honorary Secretary, Imperial Maritime League, 2, Westminster Palace Gardens, Victoria Street, London, S.W.

I am, Sir, yours obediently, WILLOUGHBY DE BROKE.

BEE-KEEPING AND SUNDRIES.

AUTUMN BEE DRIVING.

As the "taking-up" time has now approached, when in many of our country districts the industrious honey gatherers are condemned to the "sulphur pit," a word may be said on this matter.

The custom of utilising for increase the bees driven from skeps selected for this fate is good, and it is one of my favourite methods in autumn of requeening colonies that have not summered well, of strengthening nuclei, and forming fresh stocks.

Properly managed such bees are excellent for any of these purposes, but the idea an amateur has of dealing with them is sometimes astonishing. It is not the least good putting driven bees into an empty skep and then feeding, or even shaking on to starters of foundation in a frame hive.

If one's object is to form a fresh stock, one good lot or two medium ones (a swarm and cast for preference) should be shaken together on six empty combs at nightfall.

Driven bees rarely fight, and it occupies only an instant to drop a newspaper over, and place on the roof.

Next morning the paper may be removed, the quilts replaced, and a rapid feeder set in position over the feed-hole. If the bees are hived on foundation only it is better to feed slowly for a week or so, and then as fast as they will take it down.

Two pounds of thick syrup per day for 12 or 14 days will form a stock, and be sufficient to carry the bees safely through the longest winter. In my own apiaries I frequently winter two single lots in a double hive. They help to keep each other warm, and can be quickly fed. The chief thing with driven bees is to get them fed up early. They have then ample time to generate a little brood, collect some pollen for use in the spring, and form their winter nest before the chilly days of oncoming winter.

When a stock is weak with a failing queen a capital plan is to recuperate it with a young-queened lot of driven bees. It is only necessary to kill the queen, and the bees can be shaken in the following evening with no risk of fighting if plenty of smoke is blown in first.

It is perhaps well to make sure that the combs are fairly full of stores, and if not, the bees should be fed for a few days previously. The same thing applies to introducing single queens during a honey-less period.

When food is scarce the only way to induce bees to accept a new queen is to make them rich in stores by giving a few combs of honey, or feeding rapidly previous to removing the old queen. I prefer feeding myself, and I find that introduction can be made practically certain if this little matter is attended to.

The present dreadfully stormy weather is not helpful to bee-keeping. The white clover and second-crop sainfoin away on the Cotswold Hills smell delightfully even

yet, late as it is, but for the most part the air is too cool for it to secrete much nectar, and the weather too unsettled for the bees to venture far afield.

In many cases feeding will be necessary, for there is much brood and little honey in the combs of average colonies.

June was a glorious month, but since the bees have done little more than keep pace with their current consumption. But even now a month of sunshine would help to redeem the unsettled season, so let us hope for warm weather and a fair harvest time.—A. H. Bowen, Coronation Road, Cheltenham.

AN EMERGENCY HIVE.

Bee-keepers who are in "a small way" are sometimes faced with the problem of temporarily housing a swarm whilst a hive is being prepared for it. Our hives are for the most part home-made; and although a day of eight working hours is sufficient (for a hard worker) to complete a standard hive, two or three more days must elapse whilst it is being painted and drying. If the swarm is left all this time in the straw skep, it will half fill it with comb, all of which is labour wasted at the final transference, hence the "emergency hive."

Get a good strong packing-case; one 20in. by 14in. by 10in. will be very suitable; the lid is not required. Remove the bottom, doing your best not to split the boards of which it is composed, and fasten these boards together with cross-pieces. This will eventually be hinged on to the hive and form its roof. The packing-case ends must now be fitted with an inner lining on fillets of such width as to take the standard frame, of course allowing "bee-space" all round. An entrance is cut in one of the long sides, say 6in. by ¼in., and a porch may be nailed over it. As many standard frames—six or eight—as the box will take are got ready with wired foundation, and a division board should also be prepared. Now the former bottom, but present lid, is hinged on so as to open at the back, and a board for the box to stand on completes the job. If a piece of old linoleum a little larger than the lid can be found and tacked on to it, so much the better.

The swarm, when it comes, is hived in a skep as usual, and transferred to the "emergency hive" at once. When the permanent hive is ready, the frames are transferred to it in proper order, more being added at front and back if necessary: the temporary hive is cleaned out and fitted with a new lot of frames, and is ready for its next tenants. An hour or two will suffice to knock up such a temporary hive, whilst the saving of time to the bees is very considerable.—S. M. Pearce.

HONEY IMPORTS.

TABULATED FOR PAST FIVE YEARS.

The attached statistics relating to the honey imports into this country tabulated for the past five years were taken from the annual statement of the trade of the United Kingdom recently published officially. It occurred to me you might be glad to have a copy for publication, as the chief sources of supply are indicated.

The figures show that the largest quantity comes from the West Indies. This honey is, of course, used principally for manufacturing purposes, and its value in 1914 was approximately 3d. per lb.

The total imports last year amounted to over 2½ million lbs., and the average value works out at 3.45d. per lb., or just under 3½d. per lb.—Geo. W. Judge.

Importation of Honey into United Kingdom.

1910.	Quantities. cwts.	Value. £
France	1,883	4,125
United States of America	8,002	10,517
Chile	1,860	2,427
Other Foreign Countries	4,483	6,408
Total from Foreign Countries..	16,228	23,477
British West India Islands	14,160	19,775
Other British Possessions	1,644	2,592
Total from British Possessions	15,804	22,367
Total	32,032	45,844

1911.	cwts.	£
France	1,964	5,675
United States of America	6,635	9,976
Chile	1,831	2,446
Other Foreign Countries	3,669	5,086
Total from Foreign Countries..	14,099	23,183
British West India Islands	9,097	13,576
Other British Possessions	3,531	5,572
Total from British Possessions	12,628	19,148
Total	26,727	42,331

1912.	cwts.	£
France	1,086	3,352
United States of America	7,006	9,048
Chile	1,596	2,137
Other Foreign Countries	4,313	7,282
Total from Foreign Countries..	14,001	21,819
British West India Islands	8,370	12,891
Other British Possessions	726	1,387
Total from British Possessions	9,096	14,278
Total	23,097	36,097

1913.	cwts.	£
France	1,604 ..	4,977
United States of America	4,972 ..	6,567
Chile	6,266 ..	7,755
Other Foreign Countries	7,879 ..	12,509
Total from Foreign Countries..	20,721 ..	31,808
British West India Islands	7,138 ..	11,646
Other British Possessions	3,956 ..	7,219
Total from British Possessions	11,094 ..	18,865
TOTAL	31,815 ..	50,673

1914.	cwts.	£
France	563 ..	1,740
United States of America	3,559 ..	5,391
Chile	1 114 ..	1,266
Other Foreign Countries	4,924 ..	8,209
Total from Foreign Countries..	10,151 ..	16,606
British West India Islands	9,475 ..	13,638
Other British Possessions	3,746 ..	7,422
Total from British Possessions	13,221 ..	21,060
TOTAL	23,372 ..	37,666

Extract from Annual Statement of the Trade of the United Kingdom, 1914. Cd. 7968, price 5/9.

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

President, S. K. Keyes, Esq.; Secretary, Mr. J. M. Bates; Assistant Secretary, Mr. G. W. Judge.

HONEY SHOW AND EXHIBITION.

At Maypole House, Dartford Heath (near Bexley Asylum), Saturday, August 28th, 3.30 p.m. Admission free.

Competitive Classes. Entrance fee, 3d. each entry.

Class 1.—3 Sections of Honey.
Class 2.—3 Jars Light Extracted Honey.
Class 3.—3 Jars Dark Extracted Honey.
Class 4.—2 Shallow Frames.
Class 5.—Beeswax (any shape).
Class 6.—Honey Cake (not less than 1-lb.) (Members' wives and sisters eligible).
Class 7.—Honey Products (to embrace Wax, Mead, Vinegar, Candy, Sweets, &c.) (Members' wives and sisters eligible).
Class 8.—Home-made Bee Appliances (to be judged for utility).
Class 9.—Gift Class—1 1-lb. Jar of Honey.
Class 10.—Gift Class—1 Section.
Class 11.—Exhibits of an educational or scientific nature, such as photographs, lantern slides, diagrams, drawings, &c.

No entrance fee for Classes 9 and 10, and value of honey will be distributed as prizes.

Exhibits in Classes 1 to 5, 9 and 10 must be produce of members' bees.

Exhibits in Classes 8 and 11 must be made by exhibitor.

The following has also been arranged:—

(1) A demonstration in candy making by G. H. Barnes.

(2) A collective exhibition of members' bees, honey, and appliances.

(3) A collection of various kinds of bees' and other waxes, by Rev. F. S. F. Jannings, F.E.S.

It also hoped to hold a raffle for W.B.C. hive as in previous years.

HONEY JUDGING COMPETITION.

A honey judging competition has been arranged. Six jars of extracted honey from various sources will be obtained. These will be judged for quality and appearance, and placed in order of merit by a competent judge, his awards being sealed until after the competition. Competitors will have an opportunity to examine the samples and place them, according to their judgment, in order of merit. The competitors coming nearest to the sealed awards will be the winners. Entrance fee 3d.

FRAME BUILDING AND SECTION FOLDING COMPETITION.

Competitors will build three standard frames (wired) complete, and fold six sections, as in previous years. Frames, sections, and foundation will be provided by the Association. Competitors must bring other apparatus. No entrance fee.

PRIZE FUND.

In order to provide prizes for the above classes a special prize fund has been opened and contributions are invited. The Association will appreciate even the smallest donations to this fund.

REFRESHMENTS WILL BE PROVIDED.

Members are invited to send or bring any apparatus or other articles of interest to bee-keepers for inspection.

All communications relating to the Honey Show should be addressed to the Assistant Secretary, Mr. G. W. Judge, Barrowdene, Shepherds Lane, Dartford. August 10th, 1915.

SOUTH STAFFS AND DISTRICT BEE-KEEPERS' ASSOCIATION.

The annual meeting of the above Association was held in the Temperance Hall, Dudley, on May 28th.

Mr. Hipkins presiding, said that the reason for the annual meeting being later than usual was because the Hon. Secretary had had a prolonged illness. He was pleased to see him about once more, and congratulated him on his recent success at the honey judging competition held in London last October. He desired this to be placed on record, to which the meeting agreed.

The Hon. Secretary reported that the Association was making good progress, and that the membership was still increasing, despite the fact that disease was very prevalent. During the year 1914

twenty-five new members had been enrolled, and the income had increased from £14 3s. 3d. in 1913 to £17 2s. 8d. in 1914, and they now had a balance in hand of £1 1s. 9d. to commence 1915 with.

Election of Officers: Viscount Cobham, President; Sir Gilbert Claughton, Bart., and Dr. Messeter were added to the list of Vice-Presidents; Mr. C. C. Thompson, Treasurer; Mr. Joseph Price, Hon. Secretary and Assistant Expert; Mr. A. Cheshire, Assistant Secretary; Mr. A. Rollins, Expert; R. Talbot Clayton, Esq., Coseley Hall, Bilston (Representative B.B.K.A.); Committee, E. H. Hipkins, Thos. Taylor, J. Cole, A. Lester, H. Sherwood, W. Hildreth, A. Parker, A. Onions, A. E. Taylor, W. Haycock, W. Dews, C. C. Thompson, G. F. Stubbs, and A. Cheshire. Most of the Committee were elected as local Secretaries in their various districts, and it is hoped this will be the means of still further increasing the membership and promoting the cause of bee-keeping.

A summer gathering of the above Association will be held on Saturday, August 28th, at the apiary of Mr. W. Egginton, 29, High Holborn, Sedgley, at 3 o'clock. It is hoped a good number of members will turn up, as many interesting things can be seen there. A tea will be provided at cost price, and members are invited to bring their friends with them.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

RATHER LATE.

[9170] On arrival at home this evening I found a huge swarm from one of my hives in a plum tree—bad position. Most of them are under a skep now on the ground, but it was too dark to see what has really occurred.—T. KNIGHT.

[We have heard of several August swarms in different localities this year.—EDS.]

FOLDING SECTIONS.

[9171] Your very interesting correspondent, "D. M. M.," in to-day's issue—August 12—p. 284, suggests a method of folding sections so as to prevent breakage at the V. cuts. I have no doubt it will work all right, but I think a method I have used for many years with scarcely ever a mishap is simpler and even in some respects better.

I take a cup of clean warm water, dip my finger (clean, of course) in the water, and then draw it across the section on the *back* of the V. cut, thus leaving the cut itself dry. The strain on the wood is at the *back* of the V. cut, not *in* it, and I find the moisture there always prevents breakage. I use the finest white wood sections I can procure, and never perceive them stained in the slightest degree by this simple process.—W. WINTERTON, Stoke Mandeville.

ITALIAN BEES AND "ISLE OF WIGHT" DISEASE.

[9172] From the letter by Mr. H. Mace given in the BRITISH BEE JOURNAL of June 10th, it seems that he judges Italian bees a bad lot and cross-breds very bad. However, I will give my experience, and let others judge. Three years ago "Isle of Wight" disease spread into this district, and in my own case it was brought to my apiary by some of my strong stocks of black bees robbing an infected hive about a mile away. At the time it started I had over twenty stocks of black bees, five of Sladen's goldens crossed, and one stock of Italians headed by a young imported queen. To cut a long story short, I have lost all the black bees and all the Sladen's goldens, but the Italian stock did not take the disease, although the blacks went down on both sides of it. I have now thirty stocks and swarms raised from that queen and her offspring. I have some queens pure-mated, but many cross-mated, and I do not find these cross-bred bees bad to handle. My Italians are the leather coloured, and not the golden or bright Italians, and they in the pure state are remarkably quiet to handle. In the honey season even a veil is not wanted, as they do not move off the combs when examined. Then as to robbing, I do not find the Italians do it; even in the autumn they have been working quite contented on the Michaelmas daisies and ivy bloom, when the blacks were continually hovering round to pounce on a weak stock, but Italians much crossed with black bees are great robbers when once started, although they are very good honey gatherers.

Some of my cross-bred swarms have filled two boxes of shallow frames this year, although the latter part of the season has been a failure; it has been too wet for them to gather from the lime trees. My half-bred Italians show a very marked resistance to "Isle of Wight" disease, and are not the degenerate rascals some would have us believe.—H. WATTS, Bearsted, Kent.

HELPFUL HINTS FOR NOVICES.

By W. Herrod-Hempsall.

QUEEN REARING AND INTRODUCTION.

(*Continued from page 277.*)

It is also possible to obtain good queens in artificial cells as well as honey, in a shallow frame super on a stock that is working at full strength. The cells are made on forming sticks, Fig 33. Put some of the best wax obtainable in a small earthen jar, stand this in a saucepan of rain water on a paraffin stove, and heat until the wax is melted. Dip the forming stick into cold water contained in a bowl, then dip it repeatedly into the molten wax until an artificial cell of the right size is formed, then stand on one side until cold, when the cell will slip off easily. The whole operation, with three sticks on which the cells have just been formed together with loose ones on the table, is shown at Fig. 34. Prepare a shallow frame by fitting a bar in the centre, the top portion is filled with foundation, and a small piece at either end of the bottom space. If this is not done the bees will build comb over the cells instead of working them out properly. The cells are now fastened with molten wax to the underside of the central bar, as seen at top

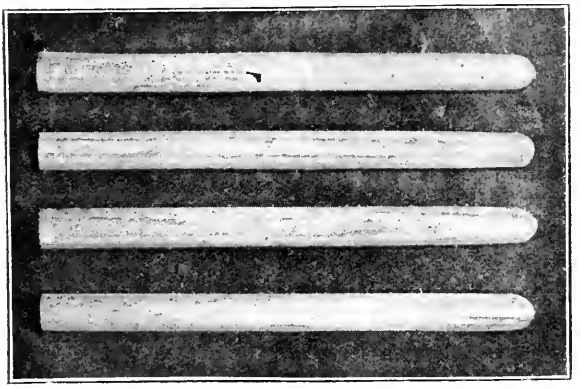


FIG. 33.

of Fig. 35. The frame is then inserted into the super, the bees will partially cut down the cells and make natural depressions upon them—centre of the same illustration. When this has been done take the frame into a warm room, also a comb from the selected stock having larvæ not more than three days old. These are easily distinguished, as they float in the chyle food, which is bluish-white in appearance. Prepare a match stick, as shown at Fig. 36, by shaving it down thinly on one side, a lip is then bent up about 3-16th inch, so that a small square lifting surface is made for insertion under the larva. To make it easy of access and avoid damaging the larva, break down the cell wall surrounding it, then insert the turned up portion of the match stick very gently under the curled up larva, lift it with as much food as possible and place it in exactly

FIG. 34.

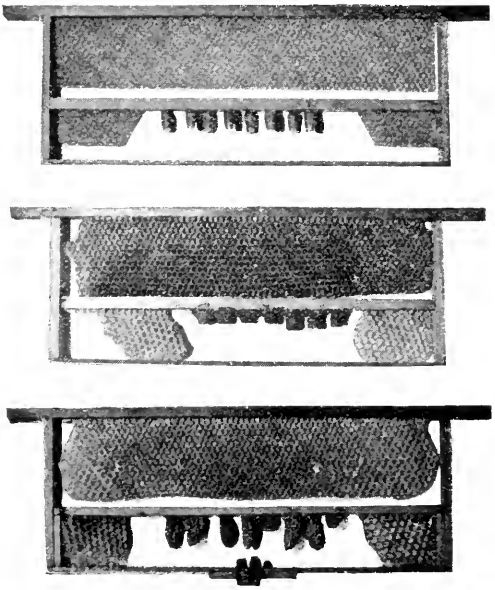


FIG. 35.

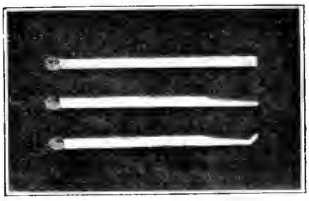


FIG. 36.

the same position in one of the artificial cells. Repeat the process until all are occupied, then replace the frame in the super, when the bees will complete the cells, as seen at bottom of Fig. 35. In this way excellent queens are obtained, as will be seen by the size of the cell cut open and attached to the bottom bar of the bottom frame. When sealed over the cells can be given to nuclei or stocks as desired.

(To be continued.)

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

HONEY AND HONEY SHOWS.

[9025] I have just bought your book on "Bee Produce," &c. I wanted to know why some of the honey I had this year appeared dull and muddy; some was bright and amber coloured, but the larger part was dark and greenish coloured, while the last lot taken off, which, by the way, was not sealed over, has started to granulate straight away. I also wanted to know how I could tell if any honey dew was mixed with the honey. This seems to me to be an important point, as every book tells one to avoid it, though all of them are careful not to tell you how to prevent the bees taking the undesired dew. It might, of course, appear obvious to take the supers off at the right time if one only knew which was the right time. Your book appears to be quite silent on the subject.

I would be glad if you could supplement the information by answering the above points.

I notice you advise people to visit the shows so as to learn which is the best honey, &c. Now I have visited several shows, and have seen large numbers of bottles of honey with numbers on them. Three lots generally have tickets announcing the prizes, &c., but as some of the other exhibits may have been disqualified by having the labels stuck on wrongly, or some other petty offence against the red tape, there is no guarantee that the best honey has taken the prizes. The only parties who can have much real interest in a honey show seem to be the three prize-winners. The other candidates cannot know why they lost, and the visitors do not know if the prize was given for the best honey or to the man who polished up the screw cap best. Why cannot the judges give some information on each exhibit, such as too thin, too thick, contains honey dew, flavour not quite good enough, &c., just written on a card? This would be useful for visitors, candidates, and all concerned. As the shows are managed at present they seem to me to be very useless affairs as far as gaining any knowledge is concerned.

This is my third year at bee-keeping. The first year I had a swarm and some driven bees, and no honey. The second year one hive swarmed and one requeened itself, and I had about 20lbs. of honey. This year I have 120lbs. of honey from three hives, and they have not swarmed. I live on the outskirts of Manchester, so cannot expect larger yields, as my bees can only gather in one direction. I have sold nearly all in 1lb. bottles for 1s. each, so I consider it profitable and interesting.—A. C.

Reply.—The method of avoiding honey dew, as you say, is so obvious, that it is unnecessary to waste space in text-books in telling people to take off the supers the moment it begins to come in. It is as impossible to prevent bees carrying it in as it is to stop the sun or moon in their circuit. As to knowing when it is coming in, the watchfulness of the bee-keeper is here brought into play. As soon as the surface of the leaves of trees, such as oak, lime, currant, plum, &c., are seen to be shiny with a sticky secretion—which occurs in very dry weather—when flowers cease to secrete nectar, a close watch on the supers will reveal the presence of honey dew by the dark colour of the liquid in some of the cells.

At all shows there is a steward or stewards, and a secretary who are willing at all times to explain the exhibits to visitors. The judge also is, as a rule, only too pleased to give information to those really seeking information. If, therefore, you have failed to obtain information it is your own fault by not inquiring. Did you ever at a cattle show see the unsuccessful beasts labelled too fat, head wrong shape, udders not perfect, &c., &c., as reasons for not awarding a prize? The gratuitous work of a judge is ofttimes too onerous as it is without putting upon him the work of recording his reasons for rejecting each unsuccessful exhibit. Common sense, observation, and inquiry will enable you to obtain the information you desire. Your idea of a show seems to have been formed when you were a bit liverish. Regulations have to be made and kept so that all exhibitors stand an equal chance. These are plainly printed, and if not observed the exhibitor is rightly disqualified, and his exhibit so labelled, therefore it is easy to see which are rejected for non-compliance with the rules. Come to one of the large shows where we are present, and we will undertake to prove to you that the judge awards the prizes to the best honey, and is not influenced by a polished cap or jar, although, naturally, cleanliness and neatness count, as indeed they should in all food-stuffs.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

"WESTMERIA" (Kendal). *Robber Bees.*—One is a cross between native and Italian; the other a native. The former was an inveterate robber; these may be known by their dark and shiny appearance, caused by the loss of all the hair from the body. This no doubt caused you to think they were some species of wild bee.

L. TOWLE (Loughboro'). *Feeding with "Cappings."*—You may give the cappings to the bees to clean up provided they come from perfectly healthy stocks. Place them in a rapid feeder with a glass over the top. A "float" feeder is the best. A good stock of bees should have 30 lbs. of stores.

OBOE (Devon).—The only safe plan is to burn them.

APHIS (Glos.)—No; honey is more likely to granulate if kept in a cold place and exposed to the light. A little honey that is already granulated mixed with clear honey will often cause it to granulate quickly. (2) A light yellow. (3) Not unless accompanied by other symptoms.

INQUIRER (Ireland).—(1) When the hive stands are high, bees that just fail to reach the alighting board and fall on the ground when returning home exhausted are unable to rise high enough to reach the entrance to the hive, which they probably will do if it is only 6 or 8 inches high. The hives are also more likely to be blown over during storms. You may get over the first difficulty by means of an extension alighting board reaching to the ground, and your own ingenuity will find a way to overcome the second. (2) The bees you describe first are inveterate robbers. (See answer to "Westmeria.") The others will also be robbers. (3) Yes, sometimes.

Honey Samples.

W. G. (Starbeck).—Both samples are clover and tree honey; that of this year contains more of the latter and also a little honey dew.

"SUFFOLK LEICESTER" (Somerset).—All three are mainly from clover, with a proportion of flower honey. No. 1 is the best, and would be suitable to show. No. 2 good. No. 3 fair.

Suspected Disease.

R. CLARK (Acklington), WYKHAM (Oxon), LANCASHIRE (Ulverston).—It is "Isle of Wight" disease.

S. W. L. (Staffs).—It is "Isle of Wight" disease.

Soak a piece of brown paper in a solution of saltpetre. Cut a piece a suitable size for a smoker cartridge, spread some powdered sulphur on it, roll up, and when lighted place in the smoker and blow the fumes in at the entrance of the hive, or under the quilt; or use a teacupful of a solution of Cyanide of Potash in the proportion of 1oz. of Cyanide to a pint of water. Be very careful with this, as it is a deadly poison. Turn back the corners of the quilt and pour a little in each corner of the hive.

S. E. (Darwen).—It appears to be a case of starvation. It was a virgin queen in No. 2.

W. S. (Westmoreland).—(1) They died from "Isle of Wight" disease. (2) Native.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

BLACK SPANIEL, Bruce, cobby, 12 months, £2 2s., or exchange bees or honey up to 50s.—BROOK, West Hanningfield, Essex. v 45

DUTCH surplus virgins, healthy, resistant, prolific, remaining few 2s. 6d.—PAUL, Salisbury-road, Bexley. v 34

FOUR strong Nuclei, each on four frames, with brood, 1915 queen, will make good stocks for next year.—Apply, M. J. LAMBOLL, Chiddingfold, Surrey.

1 CWT. fine light honey, 63s.; tins and carriage free.—C. H. BEER, Bardwell Manor, Bury St. Edmunds. v 32

FOR SALE, one stock and three swarms of bees, in good condition, in bar-frame hives.—STONE, 38, Queen's-crescent, Reading. v 36

REMINGTON No. 7 typewriter, new condition, cost upwards £20, sacrifice, £5 15s., or near offer; free approval willingly; cash wanted.—SECRETARY, Multo, Ltd., Northampton. v 35

SURPLUS Carniolan queens, fertile, 1915, 4s.—J. PALMER, Longford Farm, Market Drayton, Salop. v 33

FOR SALE, thirteen healthy stocks bees (eight in bar hives, five skeps), plenty of food; extractor; what offers?—HUDSON, White Notley, Witham. v 31

FOR SALE, 1914 Simmins's pure W.S. queen; also 1914 pure Carniolan queen, warranted healthy, 4s. each.—P. CRUICKSHANK, Stationmaster, Grantown-on-Spey. v 30

FIVE W.B.C. hives, guaranteed free from disease, perfect condition, 5s. 6d. each; several racks, with drawn out shallow frames, complete, 4s. 6d. each.—FREETH, 5, Cornwall-parade, Finchley. v 28

WANTED, 10 cwt. light honey, price with sample; also first grade sections, lowest price.—COOK, Torwood, Ashford, Middlesex. v 13

OVER 100 wired frames of strong, healthy bees, with young prolific queens, full of brood and stores for sale in any size lots, 3s. per frame; f.o.r.; boxes returnable, or 4s. 6d. each extra; cash or deposit.—JOHNSTON, 9, Sunnyside-road, Ilford, Essex. v 21

FOR SALE, several stocks of bees, 1914 Italian queens, accept best reasonable offer.—C. ASHWORTH, Heytesbury, Wilts. v 1

REWARD 10s. offered anyone informing advertiser of cottage to let, November; 3 or 4 apartments, large garden or land; suitable locality for apiary, Edinburgh district, with train or car arriving Edinburgh not later 7.30 a.m.; rent, taxes not over £20.—ARCHIBALD MacINTYRE, Orielplace, Roxburgh-street, Grangemouth. v 4

FOR SALE, shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2¾in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J" Office, 23, Bedford-street, Strand, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest. SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR DRIVEN BEES.—Rapid feeders, Canadian, to take 10lb. syrup, 2s. 6d. each; a gross dovetailed Standard frames, 10s.; two dozen bottle feeders, 1s. each; Porter bee escapes, 1s. 6d. each; slotted separators, 6d. dozen; drawn out shallow frames, 4s. 6d. dozen.—Box 10, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

CHOICE PROLIFIC ENGLISH QUEENS, 1915, selected and tested, bred from non-swarming stocks, 5s. 6d. each; safe arrival guaranteed; 12th year.—ARTHUR H. WILKES, Four Oaks, Birmingham

1915 PULLETS for sale, all popular breeds, from noted strains for winter laying; birds on approval; free catalogue.—DOLLIS PARK POULTRY FARM, Church End, Finchley. v 29

FAMOUS Cotswold honey, 1lb. screw jars, 8s. 9d.; sections, in cases, 9s. dozen.—BOWEN, specialist, Cheltenham. v 26

WANTED, sections, first quality, prompt cash; over twenty years' advertiser in "Journal."—CHILTON, Southdown Apiaries, Polegate, Sussex.

1LB. screw capped honey bottles, 25s. per gross; immediate delivery.—HILDRITT, 74, Navigation-street, Birmingham. v 37

DUTCH QUEENS, extraordinarily prolific, imported mother, 4s. each.—K. POLAND, Greenlands, Caterham. v 39

HEALTHY driven bees for sale, with young queen, 5s. a lot; also young queens, 2s. 6d. each; cash with order, and boxes returnable or charged 1s.—W. ELLIS & SON, High-street, Somersham, Hunts. v 41

HEALTHY driven bees, last week August, 5s. 6d. per lot; boxes free; cash with order.—R. W. THOMAS, North-street, Pwllheli. v 42

HEALTHY driven bees, 5s. per strong lot.—MASOM, Poplars, Moorend, Stony Stratford. v 38

TWELVE 4lb. lots of good old Fen bees, free from disease, 2s. per lb.; also six queens, at 2s. each; postage free; early applications will oblige.—R. BROWN & SON, Flora Apiary, Somersham, Hunts. v 40

DRIVEN BEES, including package, 6s. 6d.; queens, 2s. 6d.—Letters, APIARIST, Terrick Kington, Worcester. v 20

PREVENT and Cure I.O.W. by using my Bee Tonic, increased vitality, 2s. 6d. post free.—A. TROWSE, 51, Eade-road, Norwich. v 24

HEALTHY Driven Bees, with queen, 5s; strong lot, boxes returnable.—MORETON, Bee Expert, Hallow, Worcester. v 25

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d. post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 41

SECTION Glazing, lace paper strips, 7d. per 100; lace bands, 3in., 1s. 3d. per 100, post free; good section racks, slotted dividers, followon and wedge, complete, 1s 6d., as new; also section racks, complete, 1s. 3d. each.—W. WOODLEY, Beedon, Newbury.

BRICE'S BRONZE MEDAL QUEENS (23rd season), special 5s. 6d., selected 4s. 6d., guaranteed.—BRICE'S APIARIES, Green-street Green, Orpington Kent.

ITALIAN QUEENS, pure, fertile, 1915, reared by well-known breeder in France, 5s. each.—ELLIOTT, Kelvin-road, Ipswich. v 57

DON'T GET STUNG when by using **APIFUGE** you can easily prevent it.

APIFUGE will also be found extremely useful for travellers in foreign countries where insect pests abound. Bottles, **1s.**, post free.

R. GRIMSHAW, 52, Cross Flatts Place, Beeston, Leeds.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the names and addresses, together with the regiment and rank, of any bee-keeper serving his King and Country; also if killed or wounded.

We have received a number of names, a list of which we hope to print shortly, but there are many more bee-keepers who have joined either the Army or Navy whose names have not yet been sent in. We shall be pleased to have them as soon as possible.

By "Nemo."

The Important Question of Heredity.—M. Pierre Odier discusses in the *Bulletin de la Société Romande d'Apiculteur* the question of heredity in queen rearing and the influence exercised by the nurse bees on the progeny, by transmitting to the larvæ (and in consequence to the queens that may be raised) their good qualities and defects. He alludes to the discussion of this subject in the *Revue Internationale d'Apiculteur* in 1892 and 1893, in which leading men of the science, such as M. Metelli, Ch. Dadant, F. Kandratieff, A. de Candolie, T. W. Cowan, Schönfedt, and others took part. He says those engaged in queen rearing would derive profit if they were to re-read these pages. Since that time much experience must have been gained, and he asks those who are able to give the results of their observations. He then gives his own experience. He says that all who raise queens have noticed that it is not always the handsomest that give the best results; and small queens raised in feeble colonies have often given him more satisfaction. Neither does he think that it is necessary to rear queens in the largest and strongest colonies, for a small nucleus well crowded with bees, with emerging brood, and plenty of provisions, is proportionately in similar favourable conditions, with this difference, that it will not raise so large a number of queen cells. The best moment for the purpose of queen rearing is when the main flow of nectar is on.

The utilisation of queen cells from a good colony at the time of its swarming naturally has always given him good results, and it is still these that he prefers. The essential point in queen rearing is to select a good industrious colony, whose bees have proved themselves adapted to the country one inhabits, and whose character is neither aggressive nor makes them addicted to robbing. Although it is said vicious bees are the best workers, M. Odier detests them; they may not be very objectionable in a small apiary, but they are a nuisance in a large one, more especially if one has neighbours.

He mentions that a colleague of his has five colonies, the same for many years, his apiary being surrounded by woods, and there are no bee-keepers in the neighbourhood. These bees, of the common race, propagate among themselves, and there is no fresh blood introduced. He has good harvests regularly, the bees never rob each other, and are mild tempered, and can be handled without the protection of a veil or risk of being stung. On the contrary in his apiary M. Odier says certain colonies are always marked as vicious year after year. He has changed their queens, but this has not altered their tempers, and so soon as they are approached they attack one. He therefore thinks that a great part of the character, good or bad, in a colony is transmitted to the larvæ through the food which they receive from the nurse bees, and that simply changing the queen is not sufficient to modify it. Cyprian bees, however, when raised by perfectly quiet bees have never become amiable.

Prevention of Swarming.—Abbé R. Pincot, writing on this subject in *L'Apiculteur*, says that a colony that swarms is like a factory whose workmen are on strike; and the result is that there is no production of honey or wax. In 1892, 1894, and 1895 the swarming fever became such an epidemic in his apiary that he thought he would have to give up bee-keeping. He, however, experimented, and found a means of preventing this swarming. The method has been much criticised, but fortunately it has been able to survive adverse criticism, and to realise the expectations of Abbé Pincot. It consists in removing from the brood chamber frames of comb so as to leave one-third

of the space free of brood and sealed honey on one side, and to place the first super over the brood chamber just at the commencement of the main flow of nectar. With his experiments he was able to determine the cause of natural swarming. Our old masters thought, and for that matter our modern ones also cannot contradict it, for it is true, that swarming is caused by bees having a sense of oppression in a crowded hive, and these masters further said that a hive only partially filled with combs does not swarm. Therefore make a void in your hive crowded with brood, and you will have no swarms, and this is actually the object attained by this method.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Preserve Bee Papers.—Mr. Doolittle says: "I have nearly every issue of every bee journal published in the United States, and most of them bound, at my fingers' ends whenever I wish to refer to them, and I prize them very highly. They have largely been the means of making me what I am as a bee-keeper to-day. They have walked with and talked to me all along for a generation, giving me good advice regarding our beloved pursuit. I am continually getting new thoughts out of them." I can sincerely re-echo these words, and set the highest store on the bound volumes of British and American bee papers collected during the last third of a century.

A Useful Hint.—"We have found steam from a kettle for use with a steam uncapping knife most excellent for softening and toughening the corners of one-piece sections when putting them together. They fold very much better than when water is used." I find it better than even the wet blanket.

Keeping Honey.—Gleanings tells of dealers keeping honey in strange places. "Down cellar" is rather a favourite spot. Refrigerating honey seems to be fairly common. One man keeps it in a glass case, but kept cold by ammonia-pipes. "Honey should be kept in a dry place—never in the ice-box. Not only is it an absorbent of moisture, but continued cold is certain to granulate both comb and extracted. An explanatory word from bee-keepers to dealers should open their eyes as to the best place wherein to keep honey."

Advertising Honey.—Mr. Root recommends the following means of direct advertising: (1) The well-known envelope sticker "Eat Honey." (2) A cheap envelope enclosure. (3) A small leaf folder or booklet inserted with letter. (4) A small blotter with short advertisement. (5) A neat calendar.

Strengthening Weaklings.—An excellent way to strengthen very weak colonies is to shake a lot of young bees from a strong colony, selecting a comb where they are hatching fast. Any old bees will return to the hive from which they were taken, while the baby bees will remain to cheer and strengthen the weak colony. A comb of just hatching brood answers the purpose almost as well.

Judging a Queen.—Looks are often deceiving. Many judge by size alone, although this is a fallacious doctrine. Bulk by itself is no true criterion. If it were, pity some poor light weights! Editor Root says: "No one can absolutely determine in advance by her looks what a young laying queen will do. A full-bodied queen, that is one well developed, will probably do better work egg-laying than one whose abdomen is smaller; but this is not necessarily true, for there are exeeptions."

"*Smearing.*"—"A bee that has been smeared, we do not believe, is quite as good a bee after, even if it is thoroughly cleaned by its mates," writes Mr. Root. Why not? If not, then pity the many queens introduced by the method of dipping in honey. I do not for a moment credit that either will be permanently injured by a good daubing.

Non-Separatored Honey.—Mr. Allen Latham puts in a strong plea in favour of dispensing with separators in *Gleanings*. He claims: (1) It is less labour to prepare supers. (2) It is less labour to care for the product. (3) Bees more readily enter supers. (4) Swarming is greatly lessened. (5) Honey is of better quality. (6) More sections can be put in a super. (7) A bigger crop can be produced. (8) It is better for business. The editor, in a footnote, holds that "practically every honey buyer in the country has concluded that non-separatored honey is a nuisance, because there is not one man in a thousand who can produce honey in this way so that it can be marketed either in shipping cases or in cartons." We on this side will pretty unanimously agree to the truth of this pronouncement. Personally, I would further question the truth of 2, 6, 8, and would wholly dissent from 5. I feel strongly that it would be an

evil day for bee-keepers and for our industry in the country if much comb honey were sent into our markets produced in racks with no separators between the rows of sections.

Humorous!—An interesting cartoon in *Gleanings*, July 1st, shows the "Back-lot Buzzer" in his bath when news is brought that "The bees are swarming!" Wisely, the bather comes to the conclusion "Ain't much to say under this picture other than to let 'em swarm!!" This has been a season of swarming, and I have personally had some experiences new to me.

Distance Bees Travel.—A laboured article is quoted in *American Bee Journal* to show that bees at times travel up hill *nine to twelve miles*, if the topography of the country is satisfactory, working on *Calluna vulgaris*. My own observations clearly show that they never travel *in any numbers* more than about three miles from home. Perhaps that may mean four and a half miles if a man were to walk it, but even this is not more than half the lesser distance claimed by M. Gouttefangeas that his bees travel in Auvergne. I quite agree that bees will travel further from home when they are climbing for their loads than if they were carrying, say, white clover nectar from a lower to a higher altitude.

Sting Remedies.—The Editor, in dealing with this subject, gives the following: Warm milk, cold water bath, salt, sal soda, honey, soft soap, Labrador tea, alcohol, whisky, ammonia, turpentine, myrrh, bromide of potassium, saltpetre solution, honeysuckle juice, aconite, laudanum, chloroform, raw onion, iodine, belladonna, wet clay, tobacco. He tells us these are but a fraction of what could be given. I one time gave a list of one hundred, and yet several of above are new to me.

WORCESTERSHIRE BEE-KEEPERS' ASSOCIATION.

The annual Show of the above was held at Madresfield, Malvern, on August 5th, and was quite successful in every way. Although it was not definitely known till about three weeks before that the Show could be held, the entries came in very well, and were quite up to the average of previous years, except last year, which was a record. An additional feature this year was the presentation of a challenge cup by C. H. Haynes, Esq., one of the founders of the Association, to be awarded to the exhibitor who should gain the highest number of points, prizes 1, 2, and 3 to count 3, 2, and 1 points respectively. The successful exhibitor was Miss N. F. Lloyd, of Great Witley, who gained three first prizes out of four entries. Especial mention must be made of Miss Lloyd's collection of articles of food, drink, and medicine (36 varieties), which was a most attractive exhibit, all the articles being carefully and well made. The judges were the Rev. Canon Coventry (President), and Dr. W. E. Moore Ede. Demonstrations in the bee tent were undertaken by Mr. G. Richings and Mr. S. Leedham, and, although curtailed by rain, attracted a good audience.

PRIZE LIST.

OPEN CLASSES.

Class 1.—*Display of Honey and Wax:* 1st, Mrs. John Walker (Knightwick Manor); 2nd, Mr. S. Leedham (Bromsgrove).

Class 2.—*Six 1-lb. Sections:* 1st, Miss Lloyd (Great Witley); 2nd, Mr. W. Shuker (Bridgnorth); 3rd, Mr. A. H. Bowen (Cheltenham).

Class 3.—*Six 1-lb. Bottles:* 1st, Mr. A. H. Bowen; 2nd, Mr. J. T. Willson (Shirebrook, near Mansfield); 3rd, Mr. Jos. Price (Old Hill).

Class 4.—*Collection of Articles of Food, Drink, or Medicine in which Honey is the Principal Ingredient:* 1st, Miss Lloyd; 2nd, Mrs. Painter (Malvern).

MEMBERS' CLASSES.

Class 5.—*Six 1-lb. Sections:* No first prize awarded; 2nd, Mr. H. Beale (Malvern); 3rd, Mr. W. J. Woolley (Evesham).

Class 6.—*Six 1-lb. Sections and Six 1-lb. Bottles:* 1st, Miss Lloyd; 2nd, Mr. W. J. Woolley; no third prize.

Class 7.—*Six 1-lb. Bottles:* 1st, Mrs. Painter; 2nd, Mr. A. R. Moreton (Hallow); 3rd, Mrs. John Walker.

Class 8.—*Six 1-lb. Bottles Granulated:* 1st, Mr. Jos. Price; 2nd, Mr. W. J. Woolley; 3rd, Master A. Donkin (Naunton Beauchamp).

Class 9.—*Shallow Comb for Extracting:* 1st, Mr. H. W. Taylor (Earls Croome); 2nd, Mr. W. J. Woolley.

Class 10.—*Beeswax in Commercial Form, not less than 1 lb. in all:* 1st, Mr. H. W. Taylor; 2nd, Mr. Jos. Price; 3rd, Miss Nash (Upton-on-Severn).

NOVICES' CLASSES.

Class 11.—*Six 1-lb. Sections:* 1st, Mr. F. Merriman (Stoulton); 2nd, Mr. H. Beale.

Class 12.—*Six 1-lb. Bottles:* 1st, Mrs. John Walker; 2nd, Mr. H. Beale.

Class 13.—*Beeswax, ½-lb.:* 1st, Mr. S. Leedham; 2nd, Mrs. Painter.

Challenge Cup for highest number of Points: Miss N. F. Lloyd.

NORTHANTS B.K.A.

AN INTERESTING EXHIBITION.

The Northamptonshire Bee-keepers' Association provided a very interesting exhibition to a large number of visitors to Abington Park on Wednesday afternoon. The occasion was the annual show of the Association, and though the entries were naturally not up to the best standards after the ravages of the disease that have affected the district, the fifty entries were exceedingly creditable to the exhibitors. With characteristic generosity it was agreed to send the jars of honey in an open special class to the wounded soldiers.

Mr. R. Hefford, the courteous Hon. Secretary, had a strong Committee with him in arranging the show. It included the following: Mr. J. R. Truss (Ufford), Mr. F. Old (Piddington), Mr. C. J. Burnett (Northampton), Mr. A. Hiscock (Barton Seagrave), Mr. C. E. Billson (Cranford), Mr. W. H. Chambers (Northampton), Mr. G. Page (Holcot), Mr. J. Bobb (Bugbrooke), Mr. W. Osborn (Piddington), Mr. O. Orland (Flore), Mr. G. Mason (Yardley Gobion), the Rev. J. P. Frend (Collingtree), Mr. E. Thompson (Kettering).

Messrs. G. Mason (Yardley Hastings) and W. T. Munn (Northampton) judged the exhibits. The prize list was as follows:—

Twelve Sections of Honey.—1st, F. Holly (Wellingborough); 2nd, H. England (Moulton); 3rd, T. Adams (Wellingborough).

Extracted Light Honey.—1st, F. Belgrave (Denton); 2nd, J. W. Bocock (Newport Pagnel); 3rd, Miss E. Scott (Tichmarsh); 4th, C. Wells (Oxendon).

Extracted Dark Honey.—2nd, F. Belgrave; 3rd, J. Adams (West Haddon).

Granulated Honey of any year.—2nd, J. Adams; 3rd, Miss E. Scott.

Three Shallow Frames of Honey.—1st, F. Holly; 2nd, C. J. Burnett (Northampton); 3rd, Miss E. Scott.

Super of Honey.—2nd, H. England.

Beeswax.—1st, C. Wells; 2nd, J. Adams; 3rd, F. Belgrave.

Open to those who have not previously taken a first prize:—

Six Sections.—2nd, J. W. Bocock.

Six 1-lb. Extracted Light Honey.—1st, J. W. Bocock; 2nd, C. J. Burnett; 3rd, J. Shelton (Wollaston).

Special Classes:—

Jar of Honey (Open).—1st, W. Patchett (Cabourne, Lincs.); 2nd, S. Sanderson (West Wrattin, Cambs.); 3rd, J. W. Bocock; 4th, J. Denman (Northorpe, Gainsborough, Lincs.); v.h.c., F. Holly; h.c., H. F. Swann (Northampton), and W. Manfield (Greensnorton).

Cake, to be sweetened with Honey (Open to all not connected with the trade).—1st, Mrs. J. Shelton (Wollaston); 2nd, Mrs. C. J. Burnett (Northampton); 3rd, Mrs. Roberts (Northampton); 4th, Mrs. J. W. Bocock (Newport Pagnel).

ECHOES FROM THE HIVES.

The honey season in this part of the country has been far from good. There was a very good flow of first-grade honey at the beginning of June. Since then it has been very scarce, and adulterated with honey dew. There has been more white clover this year than for years, but bees have not been able to work it; in fact, the nectar has been all washed out with the continual rains. I extracted and sold 40 stones early from thirteen hives, and have fifteen shallow boxes to come off, but I know all the honey in those is black with honey dew. I have increased my stocks to twenty-eight now, and they are all very strong. I find the pure Italian queens crossed with English drones are away ahead of the blacks, but being much bigger than the blacks they must have the wire queen excluder instead of the zinc one.—RICHARD LING, Briston, Melton Constable.

In previous years my honey has been chiefly from lime trees, but this year I fancy it does not contain quite so much lime honey. I have started bee-keeping again this year after losing all my bees with "Isle of Wight" disease, but owing to pressure of military duties (in the Army Post Office) have very little time indeed to give to the bees, not really enough to attend to them properly; still it is a pleasure to have some again. I have taken one rack of about 23 lbs., and have another which I am waiting to remove at the first opportunity. I still find time to read and enjoy the BRITISH BEE JOURNAL, of which I have been a constant reader since 1908.—H. W. ROUND, Catford.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of July, 1915, was £11,562. From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

MARKETING HONEY.

A paper on this subject was given at the National Bee-keepers' Association, Denver, Colorado, last February, by Mr. Edward G. Brown, Member Western Honey Producers' Association, Sioux City, Iowa, and is published in the *Bee-keepers' Review* for August. There is much in the article that will apply to conditions over here, for there is room for great improvement in our method of marketing honey. The paper, which we give verbatim, is as follows:—

"Most of the food that man consumes, the clothes he wears, and the tools he works with, go through a definite channel of commerce: that is, the raw or bulk condition go to the mills or factory, where they are prepared for market at the lowest possible expense, and in the best possible manner.

From there they go to the jobber in good sized shipments, and the jobber in turn sends them out in smaller shipments to the retailer, who sells them to the ultimate consumer or user, in a single article or package at a time.

No one has yet devised another universal system that will give the satisfaction or economy that this plan does; and I do not believe that anyone will for some time to come. You ask, what has this to do with the marketing of honey? Just this: when you want an automobile do you go to the nearest machine shop and have one made which is unlike any other, and for which you will have to have all repairs made especially? Or if you want a wagon, do you have the blacksmith make one to order? Or do you go to the local retail implement dealer and buy a good neat article, put out by some large reliable factory of which you know the name and reputation.

Cattle, hogs and produce generally pass through the large stockyards and packing house for preparation; and thence through the retail channels of trade, frequently to the ones that are in the business of producing them in the live form.

Wheat passes through the elevator and mills, and back again through the retail channel; and the greater part of the butter is churned at large creameries, from cream that is shipped in from the surrounding territory.

You say that all these transactions make a greater expense, but there are also things about the system that counteract this.

Through modern methods the packer makes use of every part of the animal. The large creamery gets more pounds of butter from the cream, by having the temperatures and the sourness of the cream at perfect condition for churning. Far better butter is thus produced than that of the average farm wife; and after this an excellent cheese is made from the buttermilk.

The miller, by mixing the wheat from different districts, is able to grind a more uniform and satisfactory grade of flour, and under all these systems the excess of production is taken from one part of the country, and distributed to the point where there is a shortage.

The bee-keeping industry will never reach its full recognition as an agricultural pursuit and the full market value of honey will never be received, until the marketing system is developed to a point equal to that of other agricultural products.

There are a great many things in connection with the development of this system of marketing that have yet to be worked out. The men that are to do the packing of the honey in the large centralised plants have to know honey of all kinds. They have to know what kinds the trade want as table honey, and what to use for other purposes; how to blend it, and how much heat it will stand in liquefying, and not change the colour or flavour.

They also have to know what metal to make the best tanks of; the best and most economical method of applying the heat, and of handling it through the different stages of packing work.

Next the jobber and his salesman, and the retailer, have to receive an education to some extent, as to what honey is, and how it is produced; for a man without a knowledge of what he is selling, and a belief in its genuineness, makes more of a knocker for it than a salesman.

Then, first, last and most important of all, is the consumer. He has to be taught the value of honey as a food, and led to believe that he can get pure honey at any time; and told where he can get it.

A great many of you will laugh and say that folks know what honey is; but they don't. Not one person in ten in the United States knows what honey really is, where it comes from and how it is produced; and that it has a great food value.

More than that they nearly all believe that extracted honey is an adulterated article, or fraud in some way; and a large per cent. believe that it is possible to manufacture comb honey.

Now for the direct economies of packing in large quantities. If a dealer can buy containers (pails and glass jars) in car lots he will be sure to get a better price than the buyer of small lots; and if

he uses three or four cars of each, he will probably get a better rate than if he uses only one. The car rate of freight is usually about half what it is in small or local shipments.

Then when it comes to liquefying and packing, the large packer will do three times the amount of work with his fuel, and will not have the waste, because his equipment is more perfect; and he will have his equipment in use all the time, while the individual bee-keeper will have his lying idle most of the time.

Then when it comes to selling, he has an advantage of about five to one over the small bee-keeper; for the following reasons: the bee-keeper wants to sell honey when he has it, and all at once if possible; and the packer will sell honey when the trade wants it, and in such quantities as they demand. The bee-keeper builds up the demand, then his stock is exhausted; and by the time the next crop comes, the demand has to be rebuilt.

On the other hand, the large packer furnishes a steady supply by careful grading of the same kinds of honey from various districts, thus furnishing a uniform run.

The local bee-keeper may have a large crop of fine white honey one year, and the next his crop will be small and off grade, and this tends to breed distrust and dissatisfaction among the consumers.

Then comes the work of creating the demand. The small producer cannot afford to carry on a large and steady system of advertising, while that is part of the packer's business. Then when the bee-keeper starts out to sell his product, he has but the one thing to sell, and his sales will not be large enough to warrant his using much money for railroad fare. He will also probably find that there have been several bee-keepers over the same territory, and for this reason he does not make nearly as many sales as he expected to.

As he expects to make only the one trip, for as soon as his crop is sold he is done, he places as large a stock as possible; with the result that the greater portion of it granulates before it is sold by the grocer, and that makes the grocer disappointed.

The man selling for the large packer is the travelling man for the jobbing house. He makes his route every week or two, and as he sells several hundred other articles, he is willing to place small orders, which allows the grocer to keep a fresh stock. As this stock is shipped with a large shipping order of other goods, and from a central point, the freight to the grocer is of but little consequence.

And now for a few of the things that serve as a drawback to the honey market.

When the farmer has a crop of grain harvested, and wants some money, he dumps this crop into the elevator, and takes the price that the supply and demand of the world has set. But when the bee-keeper gets his crop of honey, he takes it to the store and tries to make an elevator out of the last end, instead of the first end of the general course of merchandising. As a consequence his market is woefully flooded, the price has taken an awful fall, and he don't think much of the bee business.

Because of this overstocking the grocer gets a lot of granulated honey on his hands, and he thinks less of the honey business.

Then again, the bee-keeper thinks the grocer can sell his honey for a good price, whether the flavour and quality suit the people of that community or not.

Under the above conditions, there have been towns in Iowa where good comb honey was selling for three sections for 25 cents. It was slow sale at that, with no demand for extracted honey at all. This same honey would have found a good market in other places at 25 cents. per section, and 10 pound pails would readily bring $2.00 each.

This is not entirely the bee-keepers' fault, but the fault of the honey marketing system, or rather the lack of any system at all for marketing it.

The greatest drawback of all is the ignorance of the consumer as to what honey really is. One is accustomed to clover honey, another to basswood, another to buckwheat, another to California, orange or sage, and when they get a honey of a different variety, they at once cry "adulteration."

Then again there comes to the wholesaler a demand for honey, and he in turn sends in an order to some packer of syrups or preserves. Now this man don't know honey, or anything about the different grades, so he buys the cheapest pure honey he can get from some large produce dealer or importing concern, regardless of colour or flavour.

He in turn packs it for the wholesaler, with the result that everybody along the line is disgusted with honey.

There are some firms packing honey that understand the grading and handling of it, but there are many others of the kind of which we have just spoken.

What the bee-keeping industry needs is more *honey educated* packers.

Now for unripe honey. Honey that has not been thoroughly capped and ripened in the hive is very apt to sour; and never has the body and delicate flavour of well ripened honey. This has been responsible for much dissatisfaction on the part of the honey dealers, and one firm in Chicago made the statement that it was impossible to seal honey in tumblers and have the lids stay on, unless it was well heated and sealed with a vacuum.

They had gotten unripe honey, and did not know what the trouble was. The real trouble was that some bee-keepers had gotten the "get rich quick" itch and had extracted too soon.

This article deals largely with extracted honey: and it is the belief of the writer that the law requiring the stamping of the net weight will have the greatest correcting influence on the comb honey market of anything that could be done.

Honesty is the governing policy of success; and that ruling is apt to pinch, if the policy of dishonesty is carried very far.

The writer does not expect this article to immediately revolutionise the marketing situation, but does believe that it outlines the system that will have to be developed before the honey market reaches a uniform level, set by supply and demand at all points."

PRESS CUTTING.

THE BEE-KEEPER.

(*Continued from page* 289.)

BEE SWARMING.

The bee-keeper was a character in his way, and had methods of his own at swarming time, as well as when securing the stocks of honey in the autumn. If a swarm of bees was expected, and by some means or other he was never far wrong in his surmise about the particular day in June this event would happen, he and his better-half kept a sharp look out. And on one of our visits we were just in time to watch the play. He was standing at the foot of the garden interesting us with his talk about roses when a voice cried excitedly, "The bees! the bees!" He looked hastily in the direction of the house, saw the brown cloud of bees swaying hither and thither in the sunshine; and then in a jiffy he was off. We followed him expectantly, although with some trepidation; but his wife had anticipated what he was after, and met him, carrying in her hands a large key and an old rusty frying-pan. These he secured in an eager grasp, and commenced to belabour the pan with all his might like a child playing at soldiers. Whether the rude music charmed the bees into staying where they were, or whether they never had any intention of leaving such an excellent master is still a matter of debate with us; but the agitated mass swung off in the direction of an apple tree, and then began to pour down in a stream upon a stout branch. Meantime the bee-keeper had got hold of a spare skep, and stepping quite briskly and confidently up to the tree, he took a handful of the bees and dropped them into their future home. Then he placed the skep on the ground beneath the tree, and the bees clustered about the branch dropped down in large numbers, filing in by the tiny doorway till not one remained outside. After he had carried the straw skep up to the little stand alongside the rest of the bee domiciles, he returned to his conversation about roses and divers other trifles.

TAKING HONEY.

We never had the courage to avail ourselves of the bee-keeper's offer to watch him scooping out the honeycomb, even in the face of his assurance that he always waited for a good day when the bulk of the bees were miles away searching the heather. He had heard of a plan to stupefy his subjects with a kind of fungus which grows in meadows, the "puff-ball," as this is named by the children, dried and burned on the top of a live coal. "That's a kinder thing than brimstone," he explained; "but I have a contrivance of my own. Wait a minute and my wife will fetch it out." This was done, and his contrivance turned out to be a tin headpiece attached to an old fisherman's jersey, with two spectacle glasses fitted into two holes for seeing through. With this pulled over his head, a strong reefer jacket buttoned tight over the jersey, and with a pair of leather gauntlet glove, that had once belonged to a horseman, over his hands, he was quite prepared to examine all his hives and take out the honey. "Why should I be afraid to take what's my own," he answered in reply to a query that the bees might combine and make it dangerous to his safety. "Besides, I leave plenty of honey to give them a taste during the winter, and, to tell the truth, they are as fond of a dish of treacle and water as a bairn is fond of candy. My only qualm when I am at the honey taking is that somebody may come into the garden and get a fright with the bees that are always about in the late summer." "And yet," we said, as in one voice, "you wanted us

to come and watch you!" "Yes," was the reply, "but I had my doots that you could be coaxed to drop in on a big day like that."—D. B.

From the *Greenock Telegraph*.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

KEEPING OLD QUEEN.

[9026] I shall be glad of your opinion as to whether a queen of July, 1914, which has proved very prolific during the latter half of last year and also this season, should be kept over next year, 1916.—C. M. H.

REPLY.—Yes, we should keep her for another season, but re-queen next year.

BEES ON WEST COAST OF AFRICA.

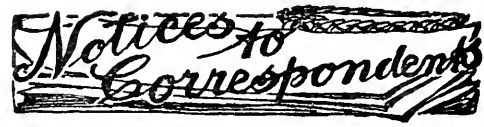
[9027] I have been asked by a resident on the West Coast of Africa to find out from you if it would be possible to keep honey bees there. The country is full of mangrove forests, and there are some native bees. I understand the mangrove is a wonderful producer of nectar in Florida, and if the climate suited the bees it should not be a very difficult matter to send out a stock from Liverpool. You would oblige me greatly by any directions or suggestions you could make as to carrying out this.—J. C. G., Westport, Ireland.

REPLY.—You do not say on what part of the West Coast of Africa your correspondent resides, but if, as you say, the country is full of mangrove forests, it should prove a good place for bees, as all the species of this plant are known to be splendid yielders of nectar, the black mangrove (*Laguncularia nitida*) being the best. The honey is very white, mild flavoured, and if the tree is growing on salt marshes the honey has a slight brackish flavour, but not sufficient to make it unpleasant. There are wild bees (*Apis Adansonii*) on the coast, but they have not been cultivated, although a considerable quantity of wax of a dark brown colour, with an unpleasant odour, is derived from them. There would be no difficulty in sending bees from Liverpool if there are steamers touching the coast near where your correspondent resides. If you can state the exact locality we may be able to give you further advice.

CYANIDE OF POTASH AND HONEY.

[9028] I had to kill my bees with cyanide of potassium by putting in the poison at the bottom of the hive and pouring water on it, taking out two or three frames to do so, and then putting frames back again with the bees still on them. They were all dead next morning. Now the frames had about 6 or 8 lbs. of honey, which I uncapped, cut up, and extracted the honey. Is this good to eat, or will it be poisonous and necessary to destroy?—FRED. WATTS.

REPLY.—As cyanide of potassium is such a deadly poison it will be best not to take any risk, but to destroy the honey.



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

R. LING (Briston). *Eggs not Hatching.*—Sorry we cannot say why the eggs did not hatch. Probably you will find all going on normally now. If not, utilise one of the other queens.

NEW BEE-KEEPER (Carnarvon). *Rapid Feeding.*—It is to encourage the bees to store the syrup, and also to ripen and get it sealed over quickly.

C. F. M. (Leamington Spa).—(A.) Yes, it is quite good for human consumption. (B.) Yes, scorch them out with

a painter's lamp, or wash with a strong solution of Izal, or carbolic acid, and water. (C.) Fumigate with formaldehyde by placing them in an air-tight box, stand a saucer or other open vessel containing 40 per cent. formaldehyde on the bottom of the box; allow about half an ounce of this for each box of shallow combs; let them stand closed up for at least 48 hours; it is safer to melt them down.

A. B. C. (Carnarvon).—(A.) The honey appears to be mainly from charlock, and this will account for it granulating so quickly. It may be reliquefied by placing the vessel containing it in another one containing water, and standing on or near the fire until the honey is clear. The water should not be allowed to boil but be just hot enough to melt the honey. (B.) The flavour is all right. (C. and E.) If reliquefied as directed you will be able to bottle it and sell for table use. (D.) As you will see, this was not hot enough, and exposure to light would hasten the process. (F. and G.) The symptoms are suspicious. If you notice any quantity of bees crawling about on the ground unable to fly, send a few of them for us to examine.

M. Bush (Totnes).—(1) No. (2) Generally about the second week in July. (3) It is all right with a very prolific queen. (4) Yes. (5) If 6 to 9 feet away, 6 feet high; beyond that distance. 8 feet high. (6) It all depends on circumstances—14 to 21 days. (7) Yes. (8) Yes, but there is no need to take it right off. (9) This depends on the district and the season. You will have to use your own judgment, but do not give extra supers when for any reason the honey flow is falling off.

Honey Samples.

H. W. Round (Catford).—The honey is ripe and is from mixed sources, the bulk of it clover with lime, willow, charlock, etc.; 1s. per 1-lb. bottle.

H. Chessman (Crawley).—The dark colour of the honey is caused by an admixture of honey dew. We cannot say without seeing the bees. Try some on the strongest stocks.

J. C. H. S. (Gight).—(1) Clover. (2) Yes, at any show. (3) It is *worth* 1s. 2d. to 1s. 3d. per bottle.

Gorse (Yeovil).—(1) It is tainted with smoke. (2) Clover and charlock. (3) It does not yield enough to enable one to say.

Suspected Disease.

V. G. W. (Shrops.).—The bees are suffering from "Isle of Wight" disease. Spray the alighting boards and round the entrances of the others with a solution of 1 teaspoonful of Izal to 1 pint of water. For other precautions see our issues of May 27th and June 10th.

"Scotia" (Bristol), M. Clayton (Leyburn), T. G. P. (Kirkcaldy).—It is "Isle of Wight" disease.

R. Symond (Whetstone).—The bees are suffering from "Isle of Wight" disease. The red insect is the bee louse (*Braula cœca*). It has nothing to do with the disease.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

October 19th to 22nd, at Royal Agricultural Hall, Islington, London, N.—British Dairy Farmers' Association Annual Show. Classes for honey. Schedules and entry forms from the Sec., F. E. Hardcastle, 28, Russell-square, London, W.C. **Entries close Sept. 10th.**

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

HONEY in bulk for sale.—Sample and price from SMITH, decorator, Caistor. v 45

FOR SALE, fine light honey, 60s. per cwt.; returnable tins, carriage forward, sample free.—ABBOTTS, Hadnall, Shrewsbury. v 48

W.B.C. HIVES, good condition, 6s. 6d. each; selling through bereavement.—MRS. OWEN, Risby, Bury St. Edmunds. v 78

FINEST English honey, 60s. per cwt.; sample, 2d.—DUTTON, Terling, Essex. v 16

FOR SALE, four healthy June swarms, 10s. 6d. each; exchange cycle; also hives and appliances.—104 Churchill-road, South Croydon. v 52

1 CWT. of honey, in screw caps, 9s. dozen; in bulk, 60s. cwt.; sample, 3d.—RACEY, Franklin, Emneth. v 51

FOR SALE, "Bee Journal," sixteen years, 1899 to 1914 inclusive, nicely bound, two years to a volume; what offers?—G. S. NEWTH, Godstone, Surrey. v 47

WANTED, ½ cwt. of third class honey, with honey dew, 3d. per lb.—Box 20, "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 44

HONEY WANTED; state lowest cash price per cwt.—E EOOBIER, 4, Jones-terrace, Old Babell, Swansea. v 49

SURPLUS Carniolan queens, fertile, 1915, 4s.—J. PALMER, Longford Farm, Market Drayton, Salop. v 33

FIVE W.B.C. hives, guaranteed free from disease, perfect condition, 5s. 6d. each; several racks, with drawn out shallow frames, complete, 4s. 6d. each.—FREETH, 5, Cornwall-parade, Finchley. v 28

WANTED, 10 cwt. light honey, price with sample; also first grade sections, lowest price.—COOK, Torwood, Ashford, Middlesex. v 13

OVER 100 wired frames of strong, healthy bees, with young prolific queens, full of brood and stores for sale in any size lots, 3s. per frame; f.o.r.; boxes returnable, or 4s. 6d. each extra; cash or deposit.—JOHNSTON, 9, Sunnyside-road, Ilford, Essex. v 21

FOR SALE, shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J" Office, 23, Bedford-street, Straud, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedfo d-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR DRIVEN BEES.—Rapid feeders, Canadian, to take 10lb. syrup, 2s. 6d. each; a gross dovetailed Standard frames, 10s.; two dozen bottle feeders, 1s. each; Porter bee escapes, 1s. 6d. each; slotted separators, 6d. dozen; drawn out shallow frames, 4s. 6d. dozen.—Box 10, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

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COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

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FOR SALE, about 6 cwt. of Cambridgeshire honey, excellent quality and well ripened; sample, 3d.—HAROLD COLLIN, Mylington, Exning, Newmarket. v 50

STRONG 6-frame nuclei, with 1915 laying queen, guaranteed healthy, no disease of any kind in the district. 15s. each; safely packed and put on rail.—A. SHARP, Halstead Farm, Barrowford, Lancashire. v 46

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1915 PULLETS for sale, all popular breeds, from noted strains for winter laying; birds on approval; free catalogue.—DOLLIS PARK POULTRY FARM, Church End, Finchley. v 29

WANTED, sections, first quality, prompt cash; over twenty years' advertiser in "Journal." —CHILTON, Southdown Apiaries, Polegate, Sussex.

HEALTHY driven bees for sale, with young queen, 5s. a lot; also young queens, 2s. 6d. each; cash with order, and boxes returnable or charged 1s.—W. ELLIS & SON, High-street, Somersham, Hunts. v 41

TWELVE 4lb. lots of good old Fen bees, free from disease, 2s. per lb.; also six queens, at 2s. each; postage free; early applications will oblige.—R. BROWN & SON, Flora Apiary, Somersham, Hunts. v 40

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"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d. post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 41

SECTION Glazing, lace paper strips, 7d. per 100; lace bands, 3in., 1s. 3d. per 100, post free; good section racks, slotted dividers, followon and wedge, complete, 1s 6d., as new; also section racks, complete, 1s. 3d. each.—W. WOODLEY, Beedon, Newbury.

BRICE'S BRONZE MEDAL QUEENS (23rd season), special 5s. 6d., selected 4s. 6d., guaranteed —BRICE'S APIARIES, Green-street Green, Orpington. Kent.

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A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the names and addresses, together with the regiment and rank, of any bee-keeper serving his King and Country; also if killed or wounded.

We have received a number of names, a list of which we hope to print shortly, but there are many more bee-keepers who have joined either the Army or Navy whose names have not yet been sent in. We shall be pleased to have them as soon as possible.

DERBYSHIRE NOTES.

The heather is out, and so commences the most glorious time in the bee-keeper's year. Some compensation is surely needed here, for since the end of May there has been little bee-keeping weather. My stocks have been kept tremendously strong all the summer, and have only needed a few weeks' fine weather to render a good account of themselves, but this has been denied. Local records say that July was the wettest month ever known in Derbyshire. What wonder, then, that no honey came in, and that nuclei have had to be fed! This also accounts for the heather being so late. In fact, on Saturday, August 21st, there was not a sign of heather honey in my hives. A week later I found it necessary to rearrange some stocks, and to give more room after less than a week of honey flow. Those whose experience of bee-keeping has been limited to the gathering of low-land honey do not know the full joys of their craft. A visit to the moors on a warm day in August, when the bees are working as they never seem to work elsewhere, is to experience the greatest joy a bee-keeper can know. His stocks are at hurricane strength and packed into the smallest possible compass in the simplest of frame hives, and the honey seems simply to be pouring in. Let him stand between the hives and the heather and hear the sweet music of the bees' hum as they wing their flight to and fro. There they go, just overhead, a never-ending procession, each bee intent solely on one work—the gathering of the last drop of nectar before winter sets in, when no more is to be gathered. The flight of each bee is like the twang of a bow-string, the cumulative effect like the resonance of a thousand telegraph wires on a winter's morning. On such a day veil, smoker, and carbolic cloth may all be dispensed with. The bees do not seem to resent interference in the least. The whole hive may be turned inside out, and they will still continue their work.

Would you know the real taste of heather honey? Then take some warm from the hive and eat it on the spot. No honey, no sweet in all the world, was ever half so delicious. When it has been pressed from the comb at home and is cold it seems somehow to have lost the best of its aroma and flavour. Perhaps the environment has much to do with it, and the bee-keeper is in the proper frame of mind when surrounded by his bees to appreciate a real sweetmeat.

Take a walk on the moor among the heather. Not a soul is in sight over all its apparently limitless expanse. But the bee-keeper need not be lonely. All around him is the hum of a thousand insects—his own bees, wild bees, wasps, and hundreds of others which only a skilled entomologist could name. Dense clouds of white pollen rise from the open flowers at every step—a sure sign of a honey flow. Here and there a lizard darts across the path, only to be lost the next moment by reason of its excellent protective coloration: in the distance is heard the wild scream of the curlew, whilst nearer—almost from underfoot—rise the grouse and fly off down the wind. This year at least they will have little cause to fear the sportsman's gun.

Viewed from a distance the moor appears bleak, forbidding, and monotonous. A closer acquaintance reveals an ever-changing panorama. Why, not even the heather is monotonous. This patch is a dark purple, the next much redder, some is almost white, whilst here and there may be found a rare specimen—a bit of pure white. I do not mean the product of the nurseryman's art, but the real white heather of Nature. Intermingled with all this are a few true heaths, the cross leaved, and the bell heather. But beware that particularly

inviting patch of bright green grass. It hides a bog, a bottomless pit perhaps, and if you tread there you will be lucky to escape with nothing more than a fright. Besides the patches of bracken relieving with their softer greens the dark peaty browns of the moor, and adding a freshness to the whole, here and there, under the shade of a rock, or in the gully cut by the moorland stream may be found the rarest and most beautiful of ferns. Let them stay in their natural habitat. Why despoil Nature for a momentary pleasure; too much vandalism has already taken place.

But, although the moor appears now to be deserted, there are not wanting signs of the time when it was a refuge for our forefathers. If you are lucky you may find a flint arrow head or stone hatchet; if you know where to look you will see the mounds of ancient earthworks or remains of stone circles where our ancestors used to worship.

Then back to the bees and the moorland farm, and if you are not satisfied with your ramble and ready for your bread and cheese and glass of milk there is something wrong with your æsthetic nature, and more wrong with your physical man.—D. Wilson.

RANDOM JOTTINGS.

By Charles H. Heap, Reading.

AN UNWISE APICULTURAL SUGGESTION.

It is not surprising, as an outcome of the war, that there are proposals for promoting small rural industries. I notice the following statement has been attributed to Mr. H. E. Morgan, who is assisting the War Savings Committee: "It is proposed that public men, such as the clerks to Parish Councils, should call meetings of those interested in gardening, poultry, pigs, and bees in order to form village societies." A few years ago a proposal to form village societies or clubs of bee-keepers would have been received with gladness, but things are different now. Microsporidiosis stalks through the land invading new domains and driving bee-keepers to despair. Under these circumstances any attempts, however good the intentions behind them, to extend bee-keeping in this country are doomed to create disappointment, and to be a stumbling-block to the future welfare of the industry.

To suppose that "Isle of Wight" disease is less prevalent and is disappearing is a great mistake. I do not believe that the sum total of the disease is less than it was a few years ago. The percentage of diseased to healthy stocks is gradually rising, and there are counties in which it is probably impossible to secure a dozen colonies of healthy bees. In one county with which I am well acquainted the number of bees has been reduced 75 per cent. in three years, while in another a similar, or an even worse, state of things prevails. It is time that we hear much less about the disease. That is not because it does not appear so widespread and deadly as formerly, but because people have become familiar with its effects and accept the inevitable without much fuss.

The point to remember is that so long as it can find hosts, *Nosema apis* will flourish. That means the more bees the more disease, and the further off will be the day when bee-keeping can be pursued with certainty as a profitable industry. If numbers of people in the villages are induced, from patriotic and other motives, to take up bee-keeping, they are sure to lose their money, and the task of stamping out the disease will be made so much more difficult and expensive that the Government after the war may hesitate to undertake it. Supposing every bee-keeper understood the great problem bee diseases involve and were to act in his own real interest and for the interests of the craft, the disease could in a comparatively short time be exterminated; but one may as well expect the millennium as to expect everybody to do the best and most sensible thing. We shall, therefore, have to go on until the legislature brings the unwise into line with the wise, or until out of sheer hopelessness the pursuit is given up.

No Compensation for Diseased Bees.—We must, in spite of all discouragements, hope for and work for legislative action, but in the event of ultimate success bee-keepers must not expect too much from the Government in the shape of compensation for stocks that may be destroyed, especially after a great and costly war. No compensation whatever should be paid for a diseased stock however slight the extent of the disease, and nothing like full value should be paid for apparently healthy stocks which are within range of diseased colonies. If apiculture is to take its proper place as a rural industry during the next twenty years considerable sacrifices will be necessary on the part of British bee-keepers. I am indeed sure that bee-keepers would best serve their own interests and the interests of their country by telling the Government they will ask for no compensa-

tion if only they will rid them of the microscopic foe which has done so much mischief during the last ten years.

Fanciful Notions Regarding Disease.—I always wish, when I read the article of some fanciful correspondent, that he would get a copy of the Board of Agriculture's Reports on "Isle of Wight" disease and read them through not once but a dozen times, with intervals of three or four weeks between each reading. Fewer futile notions would be committed to paper. They would realise, for instance, that their imaginary cures are not due to the physic they try to administer to their bees, but that the "improvement" in their condition is due to natural causes. With a knowledge of the anatomy and physiology of the bee, and a very slight knowledge of physiology in general, they would realise that the difference between bees of different colours is only a difference of pigment, just as a difference in the pigment of the human skin and hair makes one pretty lady a brunette and another a blonde. It is surprising how people will believe a statement however absurd if it is repeated often enough. *Apis mellifica* of every variety is subject to diseases, and that one variety is more resistant to disease than another may be set down as fudge. Of that abundant proof can be found up and down the country. At one time the Italians were said to be able to resist *Nosema apis*, but no one tells that tale now. At present it is suggested that Dutch bees are able to resist the disease. So far, however, no one has made any absolutely definite statement to this effect, backed up by properly ascertained and attested facts. There is only one satisfactory way of settling the question of immunity to disease of any particular variety of bee, and that is by feeding colonies of them with food specially inoculated with spores of the disease.

Bald-headed Brood.—The discussion on bald-headed brood is interesting, and raises another subject which some one may take the trouble some day to investigate. I have seen numerous instances of this abnormal condition. The first was in a nucleus hive of my own. I then attributed the lack of cappings to the smallness of the colony and its inability to provide sufficient wax for the purpose. My impression is that in all the other hives I have seen, in which the phenomenon presented itself, the population was too small to do all the work which a good queen imposed upon it. In the course of a short time the trouble always rights itself. The condition is not due to the work of the wax moth, for the wax moth would not lay bare the heads of the brood over the greater part of the surface of one or more combs.

WITH THE BEES AT THE FRONT.

INTRODUCTION.

France, 23/8/15.

I have had so many experiences and seen so many sights connected with our art during this awful war that I feel I should not be doing my duty towards my fellow bee-keepers at home were I to remain silent on the subject. I am no journalist, and were it not for the extraordinary nature of my adventures in this country and Belgium, I doubt if I should ever have attempted to write an article for publication. However, I apologise at once for any weakness I may show in this direction, and rely upon the novelty of my story (all of which is absolutely true) to compensate anyone who should think it worth while reading. Besides things apicultural I intend to give some of my military experiences also, as the combination will enable me to explain things more fully, besides making a much more interesting story. Where possible I have given the dates and names of places, although I have not always been able to do this, owing, sometimes, to not having made the proper entries in my diary, and at other times because it would be forbidden for military reasons. If I had been in possession of a camera I could have taken some most interesting photographs, but as such a thing is not allowed by the authorities, I have done the next best thing and brought away many souvenirs. Some of these consisted of pieces of heavy shells, &c., and it was with great difficulty that I managed to carry them about with me for several months before I could get them safely home. I had originally intended to relate my experiences after the war, but as the end seems still a long way off, and as I feel that my story would prove more attractive if written in the trenches, I have decided to do it "right now," as the Americans say, and only trust that my adventures will be as interesting on paper to my readers as they were in reality to myself. It may be as well to say that I am writing these lines within a hundred yards of the German positions, where we are using an old cellar (all that remains of a house) for our first-aid regimental dressing station, of which I am in charge. The troops in one of our front line trenches are only a few yards from the Germans, and can shout to one another quite easily. Continuous fighting with bombs, hand grenades, and trench mortars is going on there, and I am continually being called away, even while writing these lines, to attend some one who has been hit, often finding them past any aid that can be rendered them in this world. This is a spot which

has seen some of the most severe fighting, and was actually in the hands of the Germans a few months ago.

. . . . . .

It is just over twelve months ago now that war was declared by England against Germany, and yet the suspense of those few awful days which preceded the declaration hangs in my memory as if it were yesterday and ranks in my mind with some of the worst which I have experienced out here. Of course, domestic affairs naturally came first, but next to them the bees, and as it is the bees that I intend writing about, I will leave other matters out. When the war came I had sixteen stocks all nicely fixed up and bringing in loads of honey, but being a reservist of the first class I was called up immediately, and had to leave all my bees just as I was beginning to reap the benefit of my work of the previous spring and winter. However, I resolved that when I got to France I would keep my eyes open and see what bee-keeping was like on that side of the Channel. That my observations have not been in vain I think the following story will prove, and although most of my adventures have been attended with some risk, it has really made them more exciting, and has often passed away a few weary hours and turned my mind, for a little while at least, from the horrors of this terrible war.

(To be continued.)

DONKEY AND THE BEES.

Exciting episodes occurred at Ripley, near Woking, after the escape of a swarm of bees which the village schoolmaster was conveying to a neighbouring parish.

The hive was placed on a donkey cart, but a few of the bees escaped and promptly signalised their liberty by stinging the donkey.

Naturally the donkey kicked, and soon a wheel of the cart got on to the footpavement, and over went the hive.

The schoolmaster's predicament was such that the landlord of the Anchor Inn went to his assistance, but the bees turned their attention to him and chased him down the village street. He and the schoolmaster were badly stung all over the head, neck, and face.

Subsequently the swarm attacked another man, who in trying to get away climbed over a fence and ran down a garden, where he knelt down and rolled his head in the grass for protection, ultimately climbing into a tree.

Others were also stung, including a passing cyclist, who fell from his machine in driving the bees away.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

A VETERAN'S TROUBLES.

[9173] Here is a case worth reporting. While overhauling my twenty-five colonies, which are the progeny of imported Dutch bees, I found one having nine brood frames infested by a nest of legless caterpillars, great white brutes $1\frac{1}{2}$ inches long and $\frac{3}{8}$ inch in diameter, having black heads, and quite different from wax moths. From six frames I cut out pieces 4 to 6 inches square out of which these maggots were coming. There is no brood and very few bees are present, and I do not believe I could save this colony, although I have on my bee stand two spare colonies; but I could not expect that if I joined either to the infested lot that they would unite or remain, but would fly back to their former position on the old stand. Moreover, these spare colonies are not on frames, as for the lack of hives at the time of swarming I had to put them up in home-made boxes, where these late swarms have established themselves to no good purpose, as I do not think they are likely to winter properly.

I have also had an unpleasant experience with another colony, hived for want of a frame hive in two shallow frame supers with a section rack on the top. I cannot be reckoned just a beginner, having had bee experience during 60 years of my life, being now 83 years of age. Some 23 years ago I was honoured with a visit by our much esteemed editor, Mr. Cowan, after his safe return with his lovely young daughter (who accompanied him in his travels among those savages). He examined my 60 hives, neither of us having any protection but a cigar. We were unceremoniously stung, and I have his letter still in my possession in which he alludes to the incident. When residing in Yorkshire 45 years ago I attended to my bees myself, and took 65 colonies to the moors and

brought them back safely. About ten to twelve years ago I burned 45 colonies, hives, honey, and all on the outbreak of "Isle of Wight" disease. I mention these facts to show that I have had some bee experience to look back upon, and I have never used veil or other protection but my pipe. Now in my old age, when almost past work, in trying to take off this section rack I was bound to confess myself beaten, and had to resort to a bee veil and smoker, a present to me fifteen years ago, which has been locked away unused in my writing table ever since that time. This was of no use, for in my attempts on three consecutive days I had to fly eight times for safety into my house, quite unable to take off the section rack. For these three days I was working and trying from before breakfast at 7 o'clock all day up to 9 p.m. by lamp light. On the last night I had little sleep, hands were swollen to double their usual size and were very painful, so I determined to drag the rack away bodily by force and put up with the result. I used the bee veil, had my coat sleeves bound round my wrists and trousers at ankles, and thus protected got the rack off the hive, which I covered up. I fear the savages will probably rob part of the contents of the rack, although as there was a queen excluder on they may leave the sections when they find no queen in them. There are bees in abundance this year, and constant swarming (a late one came out on August 12th), but very little honey. Sections are badly finished and some are scarcely begun. A bee-keeper near here reports that as his bees did not go up into the sections he tried to entice them by putting in one filled with honey, but with no result.—J. G. K., Southborough Apiary, Tunbridge Wells.

[We sympathise with our correspondent and regret that such a veteran bee-keeper should have so much trouble at his age. We admire his perseverance when attempting to take off the sections and should be pleased to have a sample of those catepillars if any are left.—Eds.]

BEE HUNTING IN SOUTH AFRICA.

Wild bees abound in South Africa, where they have more foes perhaps than in any other little cultivated and open spaces of the world. The first of these enemies is man, especially savage man, who, not content with robbing them of the honeycomb, slowly amassed through long, hot days of arduous and unremitting toil, and breaking open their co-operative home and storehouse, devours also the brood comb full of young bee grubs, and "bee bread" made from the pollen of flowers, carefully collected, packed, and moistened with honey and jelly, reserved for use in the royal nursery. The South African native also uses the "propolis"—a gummy gutta-percha like cement, made by the bee—for fixing the iron spike of his assegai, or javelin, into its shaft, and for constructing the circular ring attached to his hair, which is his patent of having attained to man's full estate. But only the more civilised races of mankind have learnt to deal tenderly with the robbed bees, and to provide the little builders of the sacked city with means of sustenance, and thereby the possibility of rebuilding their ruined storehouse. Such indiscriminate and wholesale pillage is possibly one of the reasons why wild bees, especially if they have a good store of honey, are so furious, and even deadly, when their nest is first broken open, and until the honeycomb is being removed. Then they cease stinging, and set to work to fill themselves with as much honey as they can possibly carry—with a view to immediate days of scarcity. Children, adults, and even horses and cattle, have succumbed to their fury, so it is always best to be protected from attack, by clothing and the smoke of a "smudged" fire, when taking a wild bees' nest. The odour of a single sting provokes many more, as even that of an accidentally crushed bee.

Some people are especially hated by bees, and should not venture near their nests unless well covered up. Others may handle them with impunity. When a bee sentry on duty rushes out to challenge you, do not beat it off, or you will inevitably be stung by it, and then by others. Remain absolutely still, and with closed eyes, until its peculiar shrill war-cry has died away, or you will experience at least one red-hot pang on your face, your hands, or, perhaps, your eye. Angry bees are absolutely fearless. They "run amok" in a frenzy, bent on killing or at least dying in harness, since they sting only to die themselves, for their barbed shaft, when adherent to the foe, drags out their very entrails. No sight is more terrible or pathetic in its unloosed passion than that of an angry bee. It hurls itself straight as an arrow against the foe, shrilling its high-pitched war-cry. It buries itself in whatever comes first of its hated enemy—his hair, his wool, his clothes—and, with convulsed and contorted body, stings, and stings, and stings, often transfixing itself in its mad efforts to strike. And this death pæan is the signal to many, perhaps to hundreds, more. No wonder human beings, and even cattle, are stung and choked to

death by the onset of an angry swarm of bees. And yet, when "swarming" only, they may be handled without fear. Gently you may insert your bare hand into the golden brown and teeming mass. You may cull handfuls of them, and strew them on the earth. You may, perchance, catch sight of one amongst the clustering myriads of a form more ample and noble than the rest, and lightly enclose her in your hand. Then the whole warm, seething, and scented mass, will crawl, and link itself, and hang in festoons from your closed fist, but never a sting will be bared. Often we handle them thus to catch her royal majesty and clip her wings before consigning the bees to an extemporised hive, such as an old barrel, or soap or candle box. For, otherwise, on the following day at latest, there came a loud, rushing roar, straight lines of dashing bees were seen black against a purple sky, and everywhere around, and then a gradually fading murmur told us that all our work was lost, and the swarm gone—wither no one could tell, or follow.

For swarming or homeless bees lose no time in moving to a new domicile, which they have noticed or searched for long beforehand, and in a compact cloud take their queen to it across country, to a spot perhaps some miles away. In vain you may attempt to follow them, for they travel fast, and straight, and high. When we had rifled a wild bees' nest, we brought home the swarm—if possible, on the same day—in some closed receptacle, for if we waited longer we knew, by past experience, we should find them gone, and gone for ever. But again and again they refused to stay in the home we had provided for them, until we had invented some means of detaining their queen. At first we did so by enclosing her in a split reed, through holes in which she could be fed and tended. This appeared to answer, and when, after a fortnight's imprisonment, we saw that the workers had built a small empty comb upon the reed, we thought it was time to set her free. On the following morning, however, the hive was again empty, and we were only just in time to hear the roar of the departing insects, like unto the sound of wind in the tree tops, so subsequently we used to clip her wings. This answered fairly well if she happened to be a fertile queen, for if she left the hive she only fell to the ground, much to the surprise of her subjects, who for awhile continued to circle excitedly aloft, and then rejoined her on the ground, whence they were gathered and restored to the box. When this device failed, it was probably because her majesty was a virgin. Then nothing would reconcile her to her new home, and she and all her tribe gradually perished miserably, much to our grief. On these occasions a profound melancholy seemed to settle upon the whole swarm. This was obvious, not only in their sluggishness, but in the altered tone of their humming, so different from that of the active and happy insects.

Wild bee hunting is an art than can be acquired only by those who are fond of nature, have good eyesight, and all the patience of a savage—or—a fisherman. Although bees are often found in open country, occupying an old antbear's or porcupine's earth, they prefer more broken ground, such as the banks of ravines and streams, or cliffs and rocky eminences, to build in. They can there find better nesting holes, and can more easily view their way homewards from a distance, noticing familiar landmarks as they approach the nest—marks they must daily verify when they leave home. For every bee, on setting forth for its day's work, flies straight and swiftly up, and then in a slow spiral, before dashing off to collect supplies a mile or more away. This habit helps the bee hunter to find a swarm. For, on nearing one, this peculiar flight shows him a nest is near, and it is then easily located if he knows where and how to search. "Pokive! Come and let us go bee hunting," I said to my Zulu friend one afternoon. "I have a proper box in which to put them should we find any bees. Be quick, for the sun is beginning to sink. We had better take a spade, too." "No, sir," he replied, "it is heavy, and we may find no bees. I'll just carry a sharp stake, with which to dig them out." So we set forth, and went to the top of a neighbouring grass-covered hill. Then, turning our backs on the sinking sun, we shaded our eyes with the hand, and peered down into the wide valley beneath us. The "tambootie" grass was long, and thick, and reed-like. It was of a rusty reddish colour, and was dashed, and dotted with golden sunlight, which played and shifted in the dying zephyr. Already gossamer spiders were busy spinning their evening webs, long, shining threads of which passed from stem to stem, or floated loose. On this sun-smitten background could be distinguished bright moving particles—insects on the wing, some lingering from stalk to stalk, others flying steadily onwards. The smaller and swifter of the latter claimed our close attention, for they were laden bees, all homeward bound. We could hear, and also occasionally get a glimpse of them, dashing overhead, black lines against a cloudless sky. We could trace them some hundreds of yards, and most easily when

they showed up as golden motes against the background of shadows that were already stealing down our valley. They flew to every quarter in straight lines—"bee lines," tending to some especial point. "Sir! I think the majority of them are pointing in that direction," said Pokive. I concurred, and we then went further down the valley, to where they had faded from our sight, and again and again repeated this manœuvre, always proceeding towards the quarter we had first agreed upon as indicated by the bees. When we plunged into the shaded bed of the valley, we could see only, and with difficulty against the sky, an occasional insect dash over our heads, yet this was enough to direct us on our course, and to satisfy us that the particular nest we were hunting for was not in the broken ground below. On emerging upon the opposite hillside into the sunshine again, we turned to look backwards, and could see bright specks still streaming athwart the deep shadow in our direction, and past and beyond us up the golden hillside, and so we followed on.

A mile or more away, on the skyline of the furthest ridge bodering this valley, stood a small mass of rock with one sheer side turned towards us. A tree trunk grew along a horizontal cleft in its face, and then shot upwards, overshadowing the kopje towards which our bee-lines seemed to converge. "Pokive," I said, "the bees are pointing to that little precipice." "I also think so, sir. It is a likely place." And it was so, for as we neared it, many more bees were tending thither. And when we got quite close, we could locate their home by the way in which they dashed out and zigzagged up into the sky, for a final coup d'œil, before setting forth on their travels. The entrance to this nest was by the side of the upright tree trunk, the horizontal part of which filled up the gap in the rock, forming a dry and commodious cavern for the bees, which was 15ft. up in the sheer cliff-let. "Sir, I remember now, that long ago a herd boy told me of these bees. It is a very old nest, since no one would get up to take it." It was doubtless also a very large one, for scores of bees were flying in and out of the cleft. But it was inaccessible to us that day, so, concealing the box, we returned home. Early the next morning we revisited the spot. We brought with us a short ladder, a wheel-barrow, a hatchet, some buckets, a coil of rope, some matches, and some green gauze. Pokive said, "Sir, those bees will sting us badly, they are old, and will be frenzied." We knew how deadly bees could be, so made a big fire near the foot of the little cliff, and when it was well ablaze, damped it with green leaves and grass to make it smoke. Even before we had lit the fire, however, inquisitive sentries from the bee city began to challenge us, sounding their menacing pibroch, so that we hastened to plunge into our "smudge." "You see, sir, it is as I said, these bees are mad. We had best wrap ourselves up." We did so, covering our heads with gauze, and fastening up every crevice in our clothes through which the bees could creep. Nevertheless, some did contrive to crawl in, and some stung us even through our trousers. Well-smoked and covered up, we left the smudge, and erected our ladder against the rock. Pokive went up and looked into the cleft. "Well, Pokive, what do you see there?" "Oh, sir, there is a big hole here, and it is full up with honey. I see combs as long as my arm! But they are a long way in behind the tree trunk, and it is fast in the rocks." "Come down, then, and get the hatchet, in order to chop a piece out." He came down with a storm cloud of bees singing shrilly around his head, and I immediately shared their attentions. We returned to the smoke again, and took counsel. "If you tie that rope around the upright stem, and then chop through the horizontal part, Pokive, we could pull the tree down, perhaps." Pokive gave a doubtful assent. Up he went again, tied the rope as I had suggested, although not very high up, as he could not reach far, and then commenced to chop. There was at once a roar from within, and a black smother of bees poured out and hurtled upon him and me. They plastered themselves upon us in writhing masses. They tore over us, hunting madly for any crevice in our clothes; and some found one, and they whizzed, and smelt, and stung.

This onslaught, and some stings we had got in spite of our protection, so disconcerted us, that we retired again to the smoke, on which the maddened bees were quieted, and fell from us in lumps. "Sir, I think it will be a good plan if we first smoke that nest a little, so that I can chop through the log." "Very well then, Pokive, but don't smoke them enough to kill them." He made a bundle of dry grass encased in greenery, set fire to it and mounted with it up the ladder, whilst I took charge of the rope's end below. He next thoroughly fumigated the bees' fortress, until their angry hum died away, and then chopped away at the trunk. It took a long time, with repeated fumigations, before he made a gap large enough to get his hand through, and then he could not reach the comb. I pulled with all my might on the rope, but the tree was grown so tightly into the cleft that it would not budge. At

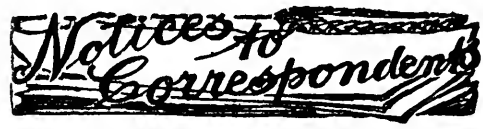
this juncture two herd boys peered over the top of the rock. "Can't you push that tree down," I asked. "No, sir, we can't reach it. But we can roll rocks down on it. Perhaps it will fall then." "Very well, then," I rejoined, "wait until we are out of the way." Then they rolled down rocks, and presently with a great crash the tree and its horizontal trunk, were torn out of the rocks, and behind it an enormous mass of comb and clustering bees was disclosed. They again attacked us, but with less vigour, and from that moment ceasing their onslaughts, betook themselves to gorging themselves with as much honey as they could hold—as is the custom with wild bees when once their citadel has been stormed. Pokive then went up again, and handed down, one at a time enormous combs, heavy with honey. We ate some, and gave the boys a share, and then filled all the four buckets we had brought, and the large wheelbarrow. We were then so laden that we were compelled to leave the swarm for another visit. But when we returned early on the following day, it had all vanished, save a few drunken clusters of murmuring insects.—R. J. Colenso, M.D., in *The Field*.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith Correspondents are requested to write on one side of the paper only.

LOCATION FOR APIARY.

[3029] I have left my employment and I want a hobby. I have been advised to keep bees. Near by there is a piece of rough land about 50ft. by 20ft., full of rough growth and stones, with no one entering into it, perfectly secluded, but outside the fence there are children playing from cottages close by, and on the other side under the embankment there is one of the busiest railways in the kingdom, with the smoke and steam blown to the said piece of ground when the wind is south and west. Would the noise of the children on the one side and the traffic on the other side make the place unfavourable for bee-keeping? Neither the children nor engines are visible to any extent, and there is plenty of opening to the country on the one side. I would be obliged for a word of advice before starting with my hobby.—J. C.

Reply.—The piece of ground will be suitable. Neither the trains nor the children will make much difference to the bees. Keep the hives as far as possible from the side where the children are playing, and have a boarded fence, or other screen, 6 or 7 feet high, along that side to compel the bees to fly over the heads of the children and thus minimise the risk of their being stung. We have seen stocks of bees kept successfully on the side of a busy railway embankment. The noise, vibration, and smoke did not appear to make any difference to them.



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

Novice (Norfolk). *Re-queening.*—Get another lot of bees and unite to the weak lot.

B. B. (Westmoors). *Dealing with Wax Moth.*—Examine the combs occasionally and kill all wax moth larvæ you can find. Keep the floor board of hive free from bits of wax, &c., and do not leave any unoccupied combs in the hives. Kill all the moths you can see (you will generally find them hovering near the hive in the evening), and always have naphthaline in the hive, also between the inner and outer cases and among the quilts. Constant watchfulness is needed to keep their numbers down. See article on wax moth in Bee-keepers' Record for August.

J. Arthur (Glasgow). *Sample of Sugar.*—The sugar may answer for preserving and cooking purposes, but it is not at all suitable for feeding bees. It is especially unsuitable for autumn food. *White* sugar only should be used for this purpose and for candy making.

Brown sugars of any kind contain too much molasses.

A. V. CAMPBELL (Beds).—(1) This is quite sound in all points. (2) They will be all right for a couple of days. (3) If they are likely to be in the box for more than a couple of days put a little candy in it. You might give a little syrup a short time before hiving—say 10 or 15 minutes.

R. SAUNDERS (Suffolk).—(1) If it is good white sugar it will do, but No. 1 is, of course, better. (2) They may be used next season, but take them out and clean all propolis, &c., off; then replace in the rack after cleaning it, and wrap all up in newspaper to keep dust and moths out. (3) They are only making certain that it is a friend. (4) Under those circumstances the only thing to do is to place a 4 or 5 lb. cake of candy on the top of the frames, but it is far better to feed up in September with good syrup. (5) Honey dew is likely to give the bees dysentery, and should not be used for winter stores. (6) They would probably have stopped if more room had been given and all queen cells cut out before the swarm returned the first time.

Honey Samples.

C. C. T. (Maldon).—No. 1 is from red and white clover and charlock. No. 2 is clover honey. Both honeys are very good in all points, and well worth staging at a good show.

LIVERPOOL (Lancs.).—It is spoiled by honey dew. It is not fit for sale as table honey.

SCOT (Stirling).—Your honey samples have not yet arrived.

Suspected Disease.

J. D. MITCHELL (Perths.).—(1) They have "Isle of Wight" disease. (2) Natives. (3) The best thing is to burn them.

J. W. PRIESTMAN (Cumberland).—The bees are suffering from "Isle of Wight" disease. You can only tell which stocks are affected by noticing from which the "crawlers" come. As a rule all the stocks become affected sooner or later, but there have been instances where one or two have survived. You might try the Izal treatment, or one of the advertised remedies, but do not be disappointed if they fail.

D. D. (Bargoed).—The bees were suffering from "Isle of Wight" disease.

G. MOORE (Essex).—The symptoms you describe are typical of "Isle of Wight" disease. It is best to burn them.

L. O. (Rhosgadfan).—You do not give us enough information to enable us to tell you what is the matter. The decrease in bees may be due to "Isle of Wight" disease, or they may have swarmed. Do you notice any bees crawling about on the ground? Send us a few of the bees and a piece of comb containing the brood cappings that are sunken, and we may be able to help you.

C. P. (Swansea).—There is Foul Brood in the comb sent. It is too late now for the bees to draw out new comb and store it with food for the winter. Put some Apicure and Naphthaline in the hive, and feed up with medicated food. If the disease is still present next spring treat as advised in the Guide Book.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

October 19th to 22nd, at Royal Agricultural Hall, Islington, London, N.—British Dairy Farmers' Association Annual Show. Classes for honey. Schedules and entry forms from the Sec., F. E. Hardcastle, 28, Russell-square, London. W.C. **Entries close Sept. 10th.**

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on the 27th of the month for insertion in the next month's "Record."

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee Journal" free of charge.

PRIVATE ADVERTISEMENTS.

WHITE Leghorn cock (Hunter's), 1914; exchange for two strong driven swarms, or sell 15s.—W. A. REID, Skeog, Whithorn, N.B.

TWO splendid stocks (English Blacks), in new W.B.C. hives, £2 5s. each.—37, Hawksley-avenue, Hillsboro', Sheffield. v 68

SEVERAL first-class stocks of Welsh Blacks, very prolific, no disease, on ten bars, sound hives, 30s. each; overstocked; section crates, 8s. per dozen.—EDGAR PRICE, The Gardens, Lower Soughton, Northop, Flintshire. v 66

WANTED, well filled clean sections, any quantity; state price.—KETTRIDGE & ACOCKS, Sudbury, Suffolk. v 65

HEALTHY driven bees, 6s. 6d.; queens, 2s. 6d.; letters.—APIARIST, Terrick, Kington, Worcester. v 64

1 LB. screw cap honey bottles, 21s. gross; cash with order.—TOM OUGH, Liskeard. v 63

RE-QUEEN NOW.—Few more 1915 English fertiles now ready, 4s. 6d., with instructions; no disease; guarantee.—LOWE, Lilac Villa, Chilwell, Notts. v 62

WHAT OFFERS for four strong stocks, all young queens, clean and healthy; ten full frames honey and brood, in Taylor's nearly new hives, non-swarming chamber under brood nest, supers, queen excluders to each, a very nice lot?—Apply, SMITENWOOD, Offord Cluny, Hunts. v 56

WANTED, a copy of "Don'ts and Why's in Bee-Keeping."—Price to "M. D.," "Bee Journal" Office, 23, Bedford-street, Strand, W.C. v 57

WANTED, young Anglo-Toggenburg goat, in milk, or near kidding, must be extra good milker, in exchange for strong stock bees, in good hive, or sell 35s.; offers.—WYER, New Sawley, Derbyshire. v 55

TO CLEAR SPACE.—2 cwt. pure English honey, in 28lb. tins, at 4d. per pound; a quantity of corrugated cardboard boxes, holding twelve jars of honey, 3s. per dozen.—BAYNES, 51, Bridge-street, Cambridge. v 61

W.B.C. HIVES, good condition, 6s. 6d. each; selling through bereavement.—MRS. OWEN, Risby, Bury St. Edmunds. v 78

1 CWT. of honey, in screw caps, 9s. dozen; in bulk, 60s. cwt.; sample, 3d.—RACEY, Franklin, Emneth. v 51

FOR SALE, shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J" Office, 23, Bedford-street, Strand, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office. 23, Bedford-street, Strand, W.C.

FOR DRIVEN BEES.—Rapid feeders, Canadian, to take 10lb. syrup, 2s. 6d. each; a gross dovetailed Standard frames, 10s.; two dozen bottle feeders, 1s. each; Porter bee escapes, 1s. 6d. each; slotted separators, 6d. dozen; drawn out shallow frames, 4s. 6d. dozen.—Box 10, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

GREAT success in feeding for stimulating—for storing and prevention of I.O.W.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex.

HEALTHY DRIVEN BEES, 5s. per strong lot. —MASOM, Poplars, Moorend, Stony Stratford. v 53

SECTION Glazing, best quality English made lace strips, 7d. per 100; lace bands, 3in., 1s. 3d., post free.—W. WOODLEY, Beedon, Newbury.

5 CWT. finest light extracted Cambridgeshire honey, in 28lb. tins, packed four in a case, tins and cases free and carriage paid for cash with order, 74s. per cwt.; sample, 3d.—BOCOCK, Ashley Apiaries, Newmarket. v 60

ITALIAN queens, young, fertile, return, 5s. each.—OLIVER KNIGHT, Epney, Stonehouse, Glos. v 67

WANTED, good quality clear honey; state price per cwt.—WARD, Hill Side Cottages, Grange Hill, Essex. v 58

HONEY WANTED, lowest price per cwt.; also sections.—JOHN E. KNIGHT, Wolverhampton. v 59

STRONG 6-frame nuclei, with 1915 laying queen, guaranteed healthy, no disease of any kind in the district. 15s. each; safely packed and put on rail.—A. SHARP, Halstead Farm, Barrowford, Lancashire. v 46

1915 PULLETS for sale, all popular breeds, from noted strains for winter laying; birds on approval; free catalogue.—DOLLIS PARK POULTRY FARM, Church End, Finchley v 29

WANTED, sections, first quality, prompt cash; over twenty years' advertiser in "Journal." —CHILTON, Southdown Apiaries, Polegate, Sussex.

HEALTHY driven bees for sale, with young queen, 5s. a lot; also young queens, 2s. 6d. each; cash with order, and boxes returnable or charged 1s.—W. ELLIS & SON, High-street, Somersham, Hunts. v 41

TWELVE 4lb. lots of good old Fen bees, free from disease, 2s. per lb.; also six queens, at 2s. each; postage free; early applications will oblige.—R. BROWN & SON, Flora Apiary, Somersham, Hunts v 40

PREVENT and Cure I.O.W. by using my Bee Tonic, increased vitality, 2s. 6d. post free.—A. TROWSE. 51, Eade-road, Norwich. v 24

BRICE'S BRONZE MEDAL QUEENS (23rd season), special 5s. 6d., selected 4s. 6d., guaranteed —BRICE'S APIARIES, Green-street Green, Orpington, Kent.

ITALIAN QUEENS, pure, fertile, 1915, reared by well-known breeder in France, 5s. each. —ELLIOTT, Kelvin-road, Ipswich. v 57

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ITS HISTORY, PRODUCTION, ADULTERATION, AND COMMERCIAL VALUE.

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With 17 Plates and 37 Figures, on Art Paper. Handsomely bound in cloth gilt, price **3s.**; postage, **3d.**

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BRITISH BEE JOURNAL & RECORD OFFICE, 23, Bedford-street, Strand, London, W.C.

THE GELSTON CURE

For the Isle of Wight Bee Disease.

Highly recommended by M. T. Batten, who, in a letter to the *British Bee Journal*, November 12, 1914, stated: "I have had no further trouble since using the Gelston Cure." Mr. Davidson, Morpeth, writing on April 20, 1915, for another bottle, says: "It has kept mine free since November."

Price 1s. 3d. and 2s. 6d. per bottle, post free, with instructions.

GELSTON & CO., The Pharmacy, Basingstoke

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the names and addresses, together with the regiment and rank, of any bee-keeper serving his King and Country; also if killed or wounded.

We have received a number of names, a list of which we hope to print shortly, but there are many more bee-keepers who have joined either the Army or Navy whose names have not yet been sent in. We shall be pleased to have them as soon as possible.

ERRATA.

On page 314 in last week's issue, the 2nd column and 13th line, for "time" read "true."

By "Nemo."

Utilising After-swarms. — M. L. Matter-Rapin, writing on this subject in the *Bulletin de la Société Romande d'Apiculture*, says that the small swarms not larger than a couple of handfuls of bees are accompanied by virgin queens, which fly away in order that they may escape from the attacks of a rival. When these swarms settle they should be captured and placed in nuclei containing combs of brood so as to prevent them from leaving. They can then be strengthened from time to time by the addition of a comb with sealed brood. If fed gently, one obtains in this way good young queens which may be made to build up a good colony.

When prime or second swarms which have a virgin queen leave the hive they are accompanied by several young queens, which when the swarm is hived frequently decamp separately. M. Matter-Rapin says that he has taken two or three, and even more, from one swarm, by covering them over with a tumbler, which he always took care to be provided with when he knew he had to hive a swarm with a virgin queen. Frequently these queens settle again on the same branch on which the swarm settled, and sometimes he has seen them return to the hive. These queens can be utilised for making nuclei or for putting into queenless hives. He considers it dangerous to open a hive which had lost its queen, and from which a swarm had issued with a virgin queen on the day after swarming, for then it may happen that the young queen may have left the hive for the purpose of mating, and if the hive is opened at that moment, it may result in the loss of the queen. This, however, does not apply to a hive which has sent out a swarm with the old queen, for the young queens are generally still in their cells.

A swarm which has a virgin queen does scarcely any work before the queen has mated. If a comb of brood be given the work begins at once.

Value of Red Clover and Alsike.—The editor of *Revue Eclectique d'Apiculture*, M. Prieur, says respecting the value of these plants that red clover occupies a very important place among cultivated forage plants, and has a great nutritive value. Unfortunately it cannot be reckoned as an important plant for bees, not that it is wanting in nectar, but for the fact that this nectar, in consequence of the depth of the corollas is inaccessible to the bees. American bee-keepers have endeavoured by selection to obtain bees with longer tongues who would be able to reach the nectar of red clover, and although some have professed to have succeeded, the results are as yet doubtful. What is true is that the Italian bee, whose tongue is a trifle longer than that of our native bee, does sometimes succeed in drawing nectar from red clover, when this, in seasons unfavourable to the full development of the flowers, offers shorter corollas. But even the Italian bee at most times is obliged to give up the attempt to reach the sweet liquid contained in the tubular flowers of this clover. What is also true is that the second growth of this plant produces shorter

flowers which the bees are able to visit, and which it is said produce an abundance of nectar. M. Prieur mentions a case in point of a friend who, observing the above fact, mowed his fields of red clover early, before its flowering. He then had a second crop, whose flowers, being much shorter, were eagerly visited by the bees. This crop was kept for seed, and the farmer declares that the honey and seed obtained paid him better than the crop could otherwise have done. Red clover, however, is not a plant to be recommended to bee-keepers at present, or until by selection the bee and the clover are more suited to each other. In the meantime bee-keepers may avail themselves of *Hybrid* or *Alsike clover*. According to M. P. de Vuyst, a Belgian authority, alsike clover, although not yielding so large a crop, compensates by being more palatable and nutritive. It also has the following advantages: It not only stands severe cold, but also humid soils. It lasts longer than red clover. It is less fibrous, and does not deteriorate by prolonged flowering, and is preferred by cows to red clover. It roots on the surface, while the roots of red clover penetrate deep into the subsoil. Being rather slender in the stem it is good to sow some red clover or timothy with it. As it succeeds on moist soils where red clover will not grow, M. E. d'Hollander says of it that in future alsike clover is destined to replace the red, which in consequence of its persistent cultivation does not find its proper nourishment in our clover-sickened land, and hence tends to disappear from our cultures. The replacement by alsike clover would be a great gain both for the bees and bee-keepers.

CRAYFORD AND DISTRICT B.K.A. HONEY SHOW.

INTERESTING EXHIBITS.

By kind permission of Mr. C. W. Knight, the Crayford and District Bee-keepers' Association held a successful show and demonstration in the grounds of Maypole House, Dartford Heath, on Saturday afternoon, August 28th. There were many visitors, and the weather being fine several hours were spent in a pleasant and interesting manner. Mr. S. K. Keyes, of Dartford, is the president of the association; Mr. J. M. Bates, the secretary, and Mr. G.W. Judge, assistant secretary. Every effort was made to keep the show up to the high level of former years, and, despite the war and its calls upon friends and supporters of the association, the result was very creditable to all concerned. The whole of the committee and members worked together most enthusiastically and harmoniously, and this being the case it was a foregone conclusion that the show would be a great success. Mr. G. W. Judge did the secretarial work owing to the indisposition of Mr. Bates, who, however, is improving in health, and was able to be present, showing that his interest in the movement is as keen as ever. Mr. Knight, in addition to lending his studio for the exhibition, allows the association's apiary to be kept in his grounds, and the members feel under a great obligation to him for his kindness. Mrs. Knight distributed the prizes.

Mr. J. Herrod-Hempsall, of Luton, officiated as judge, to the satisfaction of all concerned. There were, in all, eighty-four entries which, considering the havoc caused in the district by the "Isle of Wight" disease, was highly satisfactory and compares favourably with other years.

A HONEY TROPHY.

The feature of the show was a honey trophy, arranged by Mr. Judge on his own stand, comprising honey, wax, mead, &c., lent by the following: Mr. Judge, Dartford; Mr. Rivers, Southfleet; Mr. Bryden, Rochester; Mr. Lowe, Swanley; Mr. Upton, Stone; and Mr. Paul, Bexley. The total weight staged in this trophy was 150lbs., amongst it the honey and shallow frames exhibited by Mr. Bryden at the Royal Show at Nottingham taking the first prize there. This trophy was much admired. An observatory hive, made by Mr. Judge, was on view, and the bees with queen and combs were, during the afternoon, transferred from one of the association's hives to the observatory hive. A few interesting and instructive remarks were made by Mr. Judge and Mr. Shaw during the operation. The Rev. F. S. F. Jannings, F.E.S., of Warmsworth, near Doncaster, kindly lent his samples of bees, mineral, and insect wax. This is considered by many experts to be probably one of the best collections of wax in England, and has been collected from all parts of the world. It comprised a series of thirty-three samples. The association feel much indebted to him for the loan of this unique collection. Mr. Bryden also had on view a collection of section folders (old and new), and a mould for the making of wax candles; also a queen excluder, made by a novice on quite novel, but wrong, principles. Mr. Paul, of Bexley, lent a frame, with nursery cages. Another interesting exhibit, by Mr. G. W. Judge, was five jars of honey, produced from 1907-1911, intended to show the

public that properly ripened honey will keep for years without deteriorating.

In spite of the recent ravages of the "Isle of Wight" disease, which had almost exterminated the bees in the neighbourhood, the show was surprisingly good, and too much praise cannot be given to the quality of the exhibits staged. The judge spoke most highly of them. In Class II. (three jars of extracted honey) the exhibit of Dr. C. Lord was excellent. In Class III. some splendid honey was staged, and Mrs. Judge fully deserved the first award in Class VII. Her "products," which were of a large variety, consisted of honey liqueur, mead, honey vinegar, honey lemonade, cough cure, honey table jelly, apple jelly, honey jam

Class III.—*Three Jars Dark Extracted Honey* (10 entries); 1st, Mr. G. Bryden; 2nd, Mr. J. E. Smiles (Wilmington); 3rd, Dr. C. Lord; highly commended, Mr. E. D. Lowes (Swanley).

Class IV.—*Two Shallow Frames* (four entries): 1st, Mr. G. Bryden; 2nd, Mr. H. J. Upton; 3rd, Dr. C. Lord.

Class V.—*Beeswax, Any Shape* (seven entries): 1st, Mr. J. E. Smiles; 2nd, Mr. C. H. Rivers (Southfleet); 3rd, Mr. G. W. Judge.

Class VI.—*Honey Cake, not less than 1lb.* (eight entries): 1st, Mrs. G. Bryden; 2nd, Mr. G. H. Barnes (Dartford); 3rd, Mr. S. Heaselden (Erith); highly commended, Miss R. Bryden (Rochester).

HONEY TROPHY AT CRAYFORD AND DISTRICT B.K.A. SHOW.

(greengage), honey biscuits, honey bread, honey buns, lemon cheese, honey salve, furniture polish, tooth paste, bees' wax, and honey fondants. The exhibit of Mr. G. H. Barnes, too, was excellent.

The honey cakes formed a very good class, and a demonstration of the suitability of honey for this purpose.

The prizes were awarded as follows:—

Class I.—*Three Sections of Honey*: 1st, Mr. G. Bryden (Rochester); 2nd, Mrs. G. Bryden (Rochester); 3rd, Mr. S. A. Smith (Swanley); highly commended, Mr. Burr, Hartley.

Class II.—*Three Jars Light Extracted Honey*: 1st, Dr. C. Lord (Orpington); 2nd, Mr. H. J. Upton (Greenhithe); 3rd, Mr. G. W. Judge (Dartford); highly commended, Miss Brooks (Sidcup).

Class VII.—*Honey Products, to Embrace Wax, Mead, Vinegar, Candy, Sweets, &c.* (six entries): 1st, Mrs. Judge (Dartford); 2nd, Mr. G. H. Barnes; 3rd, Mrs. G. Bryden.

Class VIII.—*Home-made Bee Appliances*, to be judged for utility (four entries): 1st, Mr. S. Heaselden; 2nd, Mr. J. E. Smiles; 3rd, Mr. H. Sharp (Bexley Heath); highly commended, Mr. E. D. Lowes.

Class IX.—*Gift Class. One Pound Jar Honey* (10 entries): 1st, Mr. H. J. Upton; 2nd, Mr. G. Bryden; 3rd, Miss Brooks.

Class X.—*Gift Class. One Section* (seven entries): 1st, Mr. G. Bryden; 2nd, Mr. S. Austin Smith; 3rd, Mr. H. J. Upton.

Class XI.—*Exhibits of an Educational or Scientific Nature* (two entries): 1st, Mr. G. W. Judge; 2nd, Miss Poore.

A feature of the show was its great variety, not only in the classes, but in the very interesting non-competitive exhibits, and several competitions designed to test the skill and knowledge of those taking part.

During the afternoon a raffle for a "W.B.C." hive took place, and the winner was Mr. W. M. Cassidy. The "side-shows" included a honey-judging competition:—Six samples of various grades of honey had been placed in bottles and the competitors were asked to place them in order of merit. The judging took the form of a system of points, and the winners were Dr. C. Lord (10 points), Mr. A. Paulin (five points), Mrs Paulin (four points), and Mr. R. J. Stone (three points). Another novel competition was a "guessing competition." Three samples of honey (heather, honey dew, and rhododendron) had been placed in jars, and the competitors were asked to name each; the winner was Mr. C. H. Rivers, who named two correctly. Mr. G. H. Barnes gave a demonstration in candy making, which was highly instructive and much appreciated. The art of making good soft candy is rather difficult to acquire from a book, and a practical demonstration such as that so skilfully given by Mr. Barnes is invaluable, and might be made a feature at other shows.

Whilst the judging was taking place a visit was paid to the apiary, and Mr. Judge explained the association's scheme, which has for its object the creation of a central breeding establishment to supply colonies of known parentage to subscribing members.

The apiary was established in April last, and the bees are now in a very flourishing condition. Almost a record increase has been made.

An adjournment was next made to the lawn, where tea was served by a number of ladies, and afterwards Mrs. Knight presented the prizes to the successful competitors.

Mr. E. R. Stoneham, in the absence of the president (Mr. S. K. Keyes) proposed a vote of thanks to Mr. and Mrs. Knight for kindly allowing the use of their grounds.

Mr. Alfred Dewey, seconding, said the association were most fortunate in having members who came forward in such an enthusiastic manner.—The motion was carried amid applause.

Mr. Knight, in returning thanks, said it had given his wife and himself much pleasure to allow the use of their grounds, and he hoped that on a future occasion they would again have the pleasure of welcoming the association there.

A vote of thanks to the ladies of the catering committee (Mrs. Knight, Mrs. Bryden, Mrs. Judge, and Mrs. Paulin) was proposed by Mr. Shaw, seconded by Mr. Smiles, and carried with acclamation; a vote of thanks was passed to the judge (Mr. J. Herrod-Hempsall); and finally, a vote of thanks was enthusiastically given to Mr. G. W. Judge for the great amount of time he had given, and the trouble he had taken to make the show such a success. This was accorded on the motion of Mr. Bates, seconded by Mr. Barnes.

Mr. Judge, in reply, said his only objects had been to make the show a success, and to encourage bee-keeping. He had been fortunate in having the loyal support of members, and whatever credit was due must be shared by those members of the committee who had worked with him to that end. Mr. Bryden, Mr. Prior, and Mr. Upton had rendered him valuable assistance.

(*Communicated.*)

BEE KEEPING IN QUEENSLAND.

The Queensland apiarists are inquiring as to whether it is profitable to grow honey-bearing plants solely for the benefit of bees. Experiments have been made in order to ascertain if this can be successfully done, but from the various experiments which have been carried out, very few have met with success. It was a somewhat difficult matter to grow a plant which would serve two purposes—provide honey for the bees and be of commercial value. Australians claim to have discovered a plant which will serve the double purpose. They have found that sweet clover more than fulfils anticipations in this respect. It is a valuable honey-bearing plant, and irrespective of its value in making provision for the wants of the bee, it is exceedingly valuable as a fertilizer of the soil, as well as providing nutritious fodder for horses, cattle, swine, and sheep. In the introduction of nitrogen-gathering bacteria, it is said to be invaluable, so it may justly lay claim to be a plant of various uses. It is not essential to sow the seed in rich ground; it will thrive on land where other plants would languish, and not only thrive on poor ground, but the soil would eventually be enriched by its growth. Another advantage to be gained is its drought-resisting qualities, and from information obtainable it appears to be very suitable for our climate. Independent of its value as a green crop

for cattle, a good return is realised for the seed, and if handled for hay, provision may be made for stock in times of drought. The Australian journals have commented on the introduction of sweet clover, and remarkable success has been achieved. In Western Australia a trial of the seed was made in raw white sand, and it was found that this was changed to an almost dark rich loam capable of maintaining one steer to the acre from September to January. It was found that it yielded nearly two tons of nutritious hay to the acre.—The London Correspondent of the *North Queensland Register*.

A NOVEL EVICTION.

The pretty little church at Corkbeg, which stands in the domain of Sir Robert Fitzgerald, some twenty miles from Cork City, was recently the scene of a somewhat novel form of eviction, in which, happily, neither sheriff nor police posse was called on to take part, and which ended to the mutual advantage and increased comfort of both evictors and evicted. For several years previously the roof of the church, between ceiling and slates, had been in the possession of a large colony of bees; and during the recent hot weather these intruders, apparently not content to enjoy in peace the squatter rights of which they had possessed themselves, indulged in their own particular form of amusement by stinging and otherwise annoying the worshippers entering and leaving the church, and by similar interference with the comfort of mourners attending funerals in the adjoining burial-ground. So persistent had the annoyance become that Sir Robert Fitzgerald at length sought the advice and assistance of the officials of the Cork Bee-keepers' Association as to the best means of getting rid of the intruders, and through them he was put into communication with a well-known "expert" member of that association, who cheerfully undertook the difficult, and, to any novice, dangerous task of driving out the bees from their stronghold. Preliminary arrangements having been completed, Mr. K—— accordingly, on the 5th of August, proceeded to Corkbeg to reconnoitre the scene of operations, and found that the entrance to the citadel was at a height of about 18 feet from the ground, and led directly into the space over the ceiling of the church. As no other means of entrance to that space exist it was found necessary to remove several slates, and on that being done it was found that the bees had built large combs, attached to the slates and woodwork of the roof, over a space of about 4 feet square, some of the combs measuring 2½ feet by 2 feet. With the help of a carving knife, Mr. K—— then removed all the slates covering the combs, leaving these hanging by their attachment to the woodwork, and, casting off coat and hat, dropped into the roof space, and proceeded to drive the bees forward (by means of smoke) from the outer comb, which, on being cleared of the bees, was cut down and deposited in a bucket. The remaining combs were then, one after another, treated in the same way, until all had been removed, when it was found that comb and honey to the amount of about 3 cwt. had been secured.

Mr. K—— had been at the work since eleven o'clock, and the day being now well advanced—the bees meanwhile having been driven on to the wall, some finding shelter in holes, and others flying wildly about—it was considered advisable to suspend operations for the day, in order to allow the bees time and opportunity to cluster around their queen, in which condition it would be possible to hive them successfully. On returning to the church next morning the bees were found in a cluster, and Mr. K—— had no further difficulty in securing the entire colony and transferring them into a bar-frame hive, into which ten frames with full foundation had been fitted. Leaving directions with Sir Robert's steward as to the removal of the hive to its permanent location, and as to the necessary feeding of the bees, Mr. K—— then returned to Cork, and a few days later received a letter informing him that the bees had settled down comfortably in their new home, and that Sir Robert Fitzgerald and the Church Committee had been highly pleased at the manner in which their difficulty had been settled.

It is well known that there are other churches in the county in the roofs of which colonies of bees have been in possession in some cases for many years, and in which it is certain that large stores of wax and honey have been accumulated. In the case above related the value of the wax and honey secured, if carefully separated and sold, could not have been less than £7 or £8—more than sufficient to cover all expenses incurred in the removal of the bees, and leave a large margin in name of rent for the premises occupied. It can hardly be doubted that in other similar cases much larger returns await the action of those responsible for the care of the churches and the comfort of their congregations.—D. H.

BEE-KEEPING IN CHINA.

The readers of the BRITISH BEE JOURNAL will be pleased to know that their esteemed paper is read as far away as China. They will also, it is expected, appreciate the good-will of that far subscriber who comes bringing his note of variety in talking of the Chinese bees, which may perhaps share in the oddity of their masters, the citizens of the newest Republic. But is there no pretension in that trial? There are so many Reviews and Bee-papers, where a number of talented men are writing, that there seems to be very little chance left to place anything worth reading; however, the matter is so vast, and so little known yet, that there may be at least one chance. Let me take it.

In China, we find the same bees as in Europe, the pure races excepted. They are nearly half yellow, but a little smaller than those in Europe, so much so that they rear drones in worker cells of European foundation, or they bite it off to build in smaller cells, and do not readily enter the sections. Combs are built 32 mm. apart. Like their masters, they seem to distrust the innovations.

In the South-east of China (Foo-Kien) there exists another kind of bees, black, hairy, and much bigger than common bees: the workers are as big as black European drones. I nearly succeeded in getting an imported colony of those dragon bees; unfortunately, the Chinaman killed them by smoking the box over the chimney of his hut, and there are no more in Shanghai. It was a great pity, for I believe those dragon bees are able to gather from the kidney beans (*Feves, phaselus*) very abundant here in springtime. Common bees do not visit them, but the bumble bees and pseudo-bees are foraging upon them the whole day long.

The Chinese bees are very mild and very easy to manipulate; a big hive may be examined, frame by frame, without smoking and without a sting. One of their most interesting qualities is that they completely ignore the "propolis," not a bit is to be found in their hives (while I know Italians gather quite a big lot); this has perhaps the great inconvenience of attracting the "Moth," which is, in fact, a terrible enemy of bees in China. But the manipulations of frames is thus very much simplified; our spacers being staples or screws fixed in the top bar, a single push or pull can move five or six frames at a time (35 x 20 cm.); there are no squares at the bottom, our hives not being intended to travel.

Naturally, the Chinese peasants do not know the modern frame hive. They make hives of whatever vessel comes in their hands: box, bamboo-basket, old barrel, earthen pot, old petroleum box, bucket, pail, but their preferred system is the one with "drawers" without bottom, being added underneath and gathered from the top. By this ingenious system they sometimes obtain a very strong population, but what an amount of drones! These boxes are usually placed in front of their houses, high up under the projecting roof; often also they are placed inside their rooms, with a bamboo tunnel through the wall, or the entrance is made by simply removing a brick.

This last mode of location has the immense advantage of preserving bees during winter, rather severe in the North of China, where a temperature of −25deg. Centigrade is often registered during the months of December, January, and February. Another no less real advantage of this indoor location is to save boxes from thieves. Hives in the open field, like those in Europe, would have nine chances out of ten not to see the end of their first season, the Chinese being robbers or marauders by instinct or by necessity.

Hives are rather thinly scattered throughout China—a few here and there—except in certain districts in the West, where they are pretty numerous. In the wild state bees are found in trees, old walls, in tombs, or rather in the space between a coffin and the masonry surrounding it. You must remark that in China the coffin, made of thick planks (sometimes 5 inches), is simply laid on the ground, full of quicklime around the corpse, and a rough brick wall constructed around it.

As far as I know there are very few real "apiaries" in China. The No. 1 certainly belongs to the Russian Monastery inside Peking, N.E., which I visited in 1908. At that time it was composed of 85 large frame hives of different models, mostly resembling Layens (for cold climate), with Caucasian bees at the beginning, imported by Russian monks, wintering perfectly well outside, protected by a thick covering of straw or hay. The other apiary is the one of the Trappe of Yang Kia Pin, three days west of Peking, counting about twenty hives—very good mountain honey, from a special peach tree and lime tree, introduced by Rev. F. Trappisto.

Many attempts have been made by Europeans and Japanese to introduce Italian bees in China, but up to the present with little success. A friend bee-keeper, Mr. B., has bought more than twenty queen bees from America and Australia, but all were dead on their arrival except three, which the bees quickly dispatched to their ancestors: "Out with the foreigners!"

Lately the Chinese Government has manifested the intention of improving bee-keeping, but years may pass before anything is done in practice. However, that industry could give very satisfactory results in many places.

In Shanghai, where, as a rule, winters are very mild, about —5deg. Centigrade, strong colonies rear brood during the whole winter—a fact I have ascertained myself these two last seasons. Wax scales are very abundant on the bottom floor. During the calm, sunny days of November, December, and January the bees are gathering a good deal of pollen and honey from loquat-trees, just blossoming in winter; the consequence is that many colonies may swarm even in March, middle China being on the same latitude as Texas.

Unfortunately our flora is very poor, China having no meadows and no woods. Here are our best honey plants: the colza or rape, the coronilla, some fruit trees, the wistaria, the Virginia creeper, the cucurbitaceous, the sunflower, the loquat, the cotton; of them the first only is abundant.

The honey, very inferior in flavour to European or American honey, is used only as a remedy, and the quantity obtained from a box amounts to a few pounds only; 10 lbs. would be a rich harvest. Foreign honey is sold here 85 cents. to $1.00 a lb. ($1.00—2.25 fra).

The *British Bee Journal*, the *American Bee Journal*, *Gleanings*, and *Apiculture*, of Paris, are read and circulated in Shanghai, where bee-keepers, a dozen already, seem to take a keen interest in bee-keeping, and no doubt will improve that ever-interesting branch of agriculture.—Bro Romain.

WEATHER REPORT.

Westbourne, Sussex.

August, 1915.

Rainfall, 1.35in.
Below aver., 1.44in.
Heaviest fall, .43 on 31st.
Rain fell on 12 days.
Sunshine, 195.8 hrs.
Below aver., 17.3 hrs
Brightest day, 19th, 12.1 hrs.
Sunless days, 0.
Maximum temperature, 74, on 26th.
Minimum Temperature, 44, on 30th.
Minimum on grass 36, on 30th.
Frosty nights, 0.
Mean Maximum, 68.
Mean Minimum, 53.
Mean Temperature, 60.5.
Above average, 0.3.
Maximum barometer 30.317, on 23rd.
Minimum barometer, 29.555, on 2nd.

L. B. Birkett.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

PREVENTION OF SWARMING.

[9174] The concluding paragraph of the Abbé R. Pincot's letter in your issue of August 26th (page 303) is not always correct. I had a stray swarm on June 16th which I hived on ten frames of foundation. They swarmed on August 24th, and I cut out six queen cells and returned them. The two frames at each end were not fully drawn out, and there was no honey in the brood chamber, but a lot of brood on the centre frames. The rack of shallow frames above was nearly full of honey, and I had already taken off a filled second rack.

Whatever the cause of them swarming it was not want of room, as they are none too strong now with the swarm returned. —A. F. H.

THE STINGLESS BEE.

Celia Baldwin Whitehead.

Of honey I am very fond;
I'd like to keep some bees
To gather honey all the day
From off my flowers and trees.

I'd love to see them spread their wax
And skillful build each cell,
And labour hard to fill them up
With what I like so well.

But bees have stings, and I'm afraid
To venture near a hive;
If I should get amongst the swarm
I'd ne'er get out alive.

But nowadays we've many things
With "less" attached thereto,
We've fireless cookers, hornless cows
And boneless codfish, too.

The wireless telegraph reports
The cryless babe en route,
The iceless soda fountains flow,
And horseless wagons toot.

The seedless orange grows apace,
The thornless roses bloom,
The headless ballot prophesies
The grafters' graftless doom.

The painless dentist pulls our teeth,
With flourless bread we're filled,
We're carved with knifeless surgery,
With smokeless powder killed.

With all these lessons in the art
Of making thingless things,
Why can't our geniuses produce
Some bees that have no stings?

What joy I'd take to walk about
Beneath my shady trees,
And gather in the lucious sweets
Produced by Stingless Bees.

—From *The Beekeepers' Review.*

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith Correspondents are requested to write on one side of the paper only.

HONEY DEW IN SCOTLAND.

[9930] I am sending by post two samples of honey. Will you kindly tell me through the pages of the BRITISH BEE JOURNAL the source from which No. 1 has been gathered? You will see that both lots are spoiled with honey dew; would they do for feeding bees with? No. 2 is a sample of this year's heather honey. I took off a hundred of the best finished sections I ever handled filled with the concoction, as per sample No. 2. It is very annoying to see such excellent heather sections spoiled. The honey harvest has been rather poor in this district this year, owing to the first part of the season being too dry and the latter part too wet. I speak of the clover crop, which is the source from which most of our honey is gathered. I was on the moor yesterday, and I never saw the heather looking better. I will have a record number of sections to bring home this year, but, alas! it is more like treacle than heather honey. I have taken the BRITISH BEE JOURNAL regularly for some years now, the copies of which I keep and bind every year, when they make most interesting reading. I take this opportunity of again thanking you for former information, also in anticipation.—SCOT, Stirlingshire.

REPLY.—No. 1 is from clover, ragwort and fruit, with a small portion of honey dew. You might use this for bee food. No. 2 is from clover, ragwort, a little heather and lime, but quite spoiled by honey dew. It would not be advisable to feed the bees with this for winter stores. You might use it for stimulating in the spring by adding about ¼ pint of water to each 1lb. of honey.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

MRS. V. C. W. (Walton).—*Wintering Small Stocks.*—It is possible to winter a stock on five combs if they are well covered with bees and have plenty of stores. It would be better to unite the two stocks as early as posible, saving this year's queen.

W. S. (Hampshire).—*Removing Sections.*—Take them off now and close down for the winter. Place an eke under the brood chamber if the bees are too crowded.

J. C. G. (Westport, Ireland). *Bees on West Coast of Africa.*—We have had no reports from anyone keeping bees in Southern Nigeria, but if mangrove is abundant and the climate not too trying it would certainly be worth a trial, and we would advise it being made on a small scale.

NOVICE (Leicester).—*Destruction of Bees.*—(1) It is probably the work of mice. (2) Begin to feed at once. Use a slow feeder for a week or ten days, exposing three holes, or give half a pint of

syrup in a rapid feeder every other evening for that period. After that feed up as rapidly as the bees will take the syrup down, until they have the amount of stores needed. (3) When this occurs it is generally due to a scarcity of nectar.

H. Beale (Malvern).—*Removing Supers.*—(1 and 2).—The rearing of brood will be decreasing now, and if the bees can procure any honey it will be stored in the cells as the young bees emerge. You might remove the supers and place an eke under the brood chamber, or if that does not give room enough a box of shallow combs might be used. If feeding is necessary the syrup would then be stored in the brood combs. If shallow combs are used take them away when the cluster of bees has contracted, and put an eke in their place for the winter. (3) Your take of honey would be a good average this year apart from any increase of stock. The bees have done exceedingly well.

"Momo" (Cumberland).—*Bees Thrown Out.*—(1) They are immature and imperfectly developed bees. (2) No.

Bee Flora (Ramsgate).—(1) No. (2) They give a large quantity, but the quality is not good. (3) The small variety is best. (4) No. (5) White clover or sainfoin; these are about equal. (6) It would certainly make a difference. (7) Most of them devote a column to bee-keeping. Probably *Farm, Field and Fireside*, or *The Smallholder* would suit you.

Honey Samples.

H. Eggar (Chard).—We are sorry we are unable to give you any further information about your honey sample. We sent it on to Mr. Hayes, and he reports that as to the pollen grains that no doubt would decide the flavour, he is not yet acquainted with them beyond having met with them in two other samples of honey.

T. M. Geoch (Scotland).—The honey is from clover, willow and ragwort, the latter spoils the flavour. It is worth about 10d. per lb. retail.

"Enquirer" (Mansfield).—No. 1 is rather thin, and the flavour spoilt by ragwort. No. 2 is also poor in density, but the flavour is good.

"Ivo" (Newbold).—Both samples are good. No. 1 bottle was broken, therefore we could not judge so well as to its colour and density. No. 2 is very good, flavour better than No. 1, and we should prefer this one for show purposes. Have you tested the colour with the standard grading glasses? Judged by the small bottle sent it would just come in the class for light honey.

"Apic" (Weybridge).—(1) The honey is from clover. Flavour good, but density poor. We cannot say as to colour as the bottle is amber coloured. (2) A half-bred Italian.

Suspected Disease.

"Bee" (Plymouth), J. K. (Notts).—The bees are suffering from "Isle of Wight" disease.

G. M. (Bucks).—From the symptoms you describe there is no doubt the bees are suffering from "Isle of Wight" disease.

Welshman (Cardigan).—It is "Isle of Wight" disease. Your best plan is to burn them.

J. Merrick (Bristol).—We cannot give any precise date, as so much depends on the season and district, probably about the middle of July.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

October 19th to 22nd, at Royal Agricultural Hall, Islington, London, N.—British Dairy Farmers' Association Annual Show. Classes for honey. Schedules and entry forms from the Sec., F. E. Hardcastle, 28, Russell-square, London, W.C. **Entries close Sept. 10th.**

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Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per 1in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

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STRONG stock of bees, on 8 or 10 frames, 24s. or 30s., headed by young Austrian queen; sufficient heather honey in frames for winter; "I.O.W." disease never been in apiary.—PRIORY, Colwich, Stafford. v 79

FINEST English Honey, 60s. per cwt.; sample, 2d.—DUTTON, Terling, Essex v 82

WANTED, for dissecting purposes, old worn-out or otherwise useless queens, alive.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

THREE healthy 1915 queens, 2s. 6d. each; Dutch, 3s. 6d.—HALL, 2, Borough, Hinckley. v 81

WANTED, two secondhand W.B.C. hives, sound, Bristol or near.—J. MERRICK, Small-lane, Fishponds, Bristol. v 80

TWELVE 14lb. tins of light honey, 7d. lb.; just going candied.—CUTFORTH, hairdresser, Oakham, Rutland. v 75

HONEY, finest light extracted, 60s. per cwt.; two gross screw caps, 8s. 6d. per dozen; heather, 9s. per dozen; sample, 3d.—PHILLIPS, Kirkbridge, Carlisle, Cumberland. v 74

FOR SALE, extractor, complete, in perfect condition, 12s. 6d.—PRESSEY, Carshalton-hill, Coulsdon. v 23

WANTED, offers for bees in hives, for two pairs of show homers, one an Antwerp hen, and four Norwich show cages.—D. SINCLAIR, Inchnuck Cottage, by Glenboig, Lanarkshire. v 70

SEVERAL first-class stocks of Welsh Blacks, very prolific, no disease, on ten bars, sound hives, 30s. each; overstocked; section crates, 8s. per dozen.—EDGAR PRICE, The Gardens, Lower Soughton, Northop, Flintshire. v 66

WANTED, well filled clean sections, any quantity; state price.—KETTRIDGE & ACOCKS, Sudbury, Suffolk. v 65

W.B.C. HIVES, good condition, 6s. 6d. each; selling through bereavement.—MRS. OWEN, Risby, Bury St. Edmunds. v 78

1 CWT. of honey, in screw caps, 9s. dozen; in bulk, 60s. cwt.; sample, 3d.—RACEY, Franklin, Emneth. v 51

FOR SALE, shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J" Office, 23, Bedford-street, Strand, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR DRIVEN BEES.—Rapid feeders, Canadian, to take 10lb. syrup, 2s. 6d. each; a gross dovetailed Standard frames, 10s.; two dozen bottle feeders, 1s. each; Porter bee escapes, 1s. 6d. each; slotted separators, 6d. dozen; drawn out shallow frames, 4s. 6d. dozen.—Box 10, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

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COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d. post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 41

INVEST in 1lb. screw top bottles; appreciating in value, and not subject "I.O.W.", 25s. per gross; immediately delivery.—HILDRITT, 74, Navigation-street, Birmingham. v 78

HEALTHY driven bees, with queen, boxes free, 4s. 6d. per lot; boxes returned carriage paid, 3s. 6d. per lot.—CREWES, Campfield Apiary, Truro, Cornwall. v 77

HEALTHY driven bees, with young queen, 5s. 6d. per lot; boxes free.—ROLLINS, Stourbridge. v 76

SECTIONS, run honey, and beeswax required.—ROWE, 6, King's-road, Cardiff. v 72

A FEW 1915 young fertile queens, in introducing cage, guaranteed healthy, 2s. each.—JOCKMAN, Sidney Farm, Cherryhinton, Cambridge. v 71

GREAT success in feeding for stimulating—for storing—and prevention of I.O.W.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex.

SECTION Glazing, best quality English made lace strips, 7d. per 100; lace bands, 3in., 1s. 3d., post free.—W. WOODLEY, Beedon, Newbury.

ITALIAN queens, young, fertile, return, 5s. each.—OLIVER KNIGHT, Epney, Stonehouse, Glos. v 67

1915 PULLETS for sale, all popular breeds, from noted strains for winter laying; birds on approval; free catalogue.—DOLLIS PARK POULTRY FARM, Church End, Finchley v 29

WANTED, sections, first quality, prompt cash; over twenty years' advertiser in "Journal."—CHILTON, Southdown Apiaries, Polegate, Sussex.

HEALTHY driven bees for sale, with young queen, 5s. a lot; also young queens, 2s. 6d. each; cash with order, and boxes returnable or charged 1s.—W. ELLIS & SON, High-street, Somersham, Hunts. v 41

BRICE'S BRONZE MEDAL QUEENS (23rd season), special 5s. 6d., selected 4s. 6d., guaranteed.—BRICE'S APIARIES, Green-street Green, Orpington, Kent.

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A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country; also if killed or wounded.

We print below some of the names already sent in. We have also received some interesting letters, and hope to publish a selection in an early issue. We shall be pleased to have other names as soon as possible.

MEMBERS OF THE STAFFS B.K.A.:

Col. Sir Arthur Boscawen, Thames Defences.

Capt. G. H. Green—Worcesters.

Lieut. T. Coopsey—Worcesters.

Dr. Lloyd—Royal Navy.

Gunner F. T. Foster—R.G.A., Singapore.

Pte. T. Bailey—7th Worcesters.

Pte. R. Wagg—Birmingham City Battalion.

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Major Sitwell, Ord Hill, Berwick-on-Tweed (Secretary N.B.K.A.)—6th Northumberland Fusiliers.

Col.-Sergt. J. Smith, Forest Hall, Newcastle-on-Tyne — 5th Northumberland Fusiliers.

Sap. George Bruce, West Street, Wooler—R.E.

Pte. Thos. Gordon, Bendon, Wooler—Royal Scots.

Lieut. K. O. McLeman, Rothampstead Laboratory, Harpenden—R.A.M.C.

2nd Lieut. P. J. Cowan—3/10th Middlesex Regiment (son of our Senior Editor).

Staff-Sergt. Mortimer, High Street, Winfrith, Dorset—No. 3 Co. 17th Div. Train, A.S.C.

Percy G. Harding, Steerage Valley, Ilfracombe—Royal North Devon Hussars.

Gunner A. A. Bagley, Brightlingsea, Essex—10th Middlesex, D.C.O.

W. Medlock, Toplar's Hill Apiary, Edworth, Baldock, Herts.—21st Siege Battery, R.G.A.

BY "NEMO."

Bees Suffering from Anæmia.—M. Bourgeois, writing in the *Revue Française d'Apiculture*, says that next to foul brood, what he calls "anæmia" in bees is the greatest hindrance to productive bee-keeping. Two different causes lead to unproductiveness of a colony, namely, unfertility of the queen and anæmia of the bees. This with its allies, such as spring dwindling, May-pest, paralysis, decadence, &c., the writer thinks are the forerunners of sour brood, or, as he terms it, "anæmic foul brood." This disease seems to be ignored by writers, but is known to queen raisers, who make free use of nuclei and stimulative feeding, and are in the neighbourhood of sugar refineries and melliferous districts poor in the production of strengthening pollens. A scarcity of honey, and more especially of healthy nutritive pollen, as also an abundant harvest may induce anæmia. Whether it comes from want or abundance, it is always the result of a defective alimentation of the queen and brood, the rearing of a small quantity, or greatly reduced brood, and of overforcing in any way. What M. Bourgeois calls "accidental anæmia" commences as a result of the bad quality of pollen, scarceness of nectar, and general overwork, and in the long run terminates by constitutional anæmia or degeneracy of the bees. Anæmia by overwork is characterised by: 1st, a superabundant elaboration of nectar or sugar syrup, which shortens the life of adult bees; 2nd, the encumbered brood combs, which induce the colony to neglect the collection of pollen and the hygienic care of the brood.

It is usually recommended that colonies

should be completely developed and built out in readiness for the main flow of nectar. This the author considers a mistake, for a colony which is thoroughly ripe—that is, having passed through all the phases of multiplication that Nature has assigned it—is apt to (1) be idle and deteriorate, (2) become anæmic in luxuriating in its opulence of abundant provisions, and (3) swarm naturally in order to escape from the anæmic congestion which menaces it. These three conditions will result in unsuccess if the bee-keeper does not take care to maintain an equilibrium of all the working functions within and without the hive. To do this a colony should be strong at the commencement of the flow of nectar, and have a certain desire for multiplication and comb construction. To prevent anæmia and secure success the colony should have at this moment a young queen, vacant space for building combs, and a good incoming of various pollens for brood rearing.

In practice, in order to prevent the bad results of anæmia, it is advisable to swarm (depopulate) strong congested colonies, and to make them build new combs so long as they are gathering surplus. This will stimulate the production of young bees and honey, by forcing the congested colonies to work outside and the rearing of healthy brood inside by a copious supply of nourishing pollen. When left to themselves bees escape such accidents by natural swarming. This hygienic emigration condemns the bad practice of using old combs, the Utopia of non-swarming, and the destruction of swarms. During his experience M. Bourgeois has found that in an ordinary year it is sufficient to let the bees build two new combs, four to five in a good year, and six or more in a very good year. Practice has also shown him that the nurse bees have more influence on the brood than the mother from which the eggs were derived. Thus larvæ from eggs of a well-bred queen nursed by an indolent colony will produce indolent bees, while those from an inferior queen nursed by a strong colony will give industrious bees. To re-establish degenerating colonies, replacing the queens has been recommended, but the simplest way is to kill the queen and distribute the queenless bees among other hives. Another way is to remove the queen and all the brood from the dwindling colony and give this a fertile queen and choice brood. This is a special way of making an artificial swarm.

The Nutritive Value of Honey.—In an article by Jul. Frei in the *Schweitzerische Bienenzeitung* comparing the nutritive value of honey with that of other aliments, he gives a graphic illustration of the percentage values worked out by Dr. Konig, which clearly show what a valuable article of food honey is. The following are the values:—Milk, 12 per cent.; Potatoes, 25 per cent.; Honey, 80 per cent.; Eggs, 25 per cent.; Maize, 85 per cent.; Beef, 22 per cent.; Cheese, 50 per cent.; Bread, 65 per cent.; Butter, 93 per cent.; Rice, 85 per cent. This shows that bread and honey combined is a nourishing food, and contains 72.5 per cent. of nourishment.

SOUTH STAFFORDSHIRE AND DISTRICT BEE-KEEPERS' ASSOCIATION.

On August 28th the above Association held a summer gathering at the apiary of Mr. W. Egginton, of High Holborn, Sedgley. Although not situated in a good centre, a fair number of members turned up.

In the apiary many interesting things were seen, and the bees were examined and manipulated very satisfactorily by Mr. A. Cheshire, of Coseley. To those that did attend it was a day of surprises, for Mr. Egginton had certainly spared no pains to keep his stocks in good form. He has been rewarded this season by a harvest of over 200 lbs. of splendid honey, and four swarms from two stocks in the spring. Mr. Egginton's methods of working were revealed in a diary he kept of each hive; this was exceedingly useful knowledge to those bee-keepers in attendance.

After tea and a short gramophone concert on the lawn, the members adjourned to the workrooms to see the many and various appliances our host had made for his bees. These included winter passages, candy holders, swarm boxes, swarm catchers, ventilators in hive floor boards, &c., but the most interesting of all was a new hive for queen rearing and mating, made after Sladen's plan, fitted up with division boards to accommodate three lots, all with a separate entrance and a dummy board feeder.

Afterwards the members were introduced to the contents of the fossil museum, Mr. Egginton explaining that most of his collection were of his own finding, and had recently been loaned to the British Museum, who were now anxious to acquire them permanently.

Mr. Egginton suggested that probably they would get them some day when he no longer required them. In fossil collecting and arranging in the various classes Mr. Egginton displayed the same energy as with his bee-keeping, and all those who saw the many interesting specimens will long remember them,

and many will probably be better bee-keepers by having seen what can be done by adopting a good method. Amongst the many things in the museum none appealed to bee-keepers more than the fossils of the dragon fly; although embedded in stone for probably hundreds of years the wings were still quite easily seen, and under a magnifying glass made a delightful picture.

Glass phials containing many different coloured samples of sand taken from the shores of the Isle of Wight caused special interest, and someone humorously asked if these were subject to the bee disease of that name.

Numerous pieces of stone and metal, including iron and tin ore, flint weapons of the ancients, and tools of the stone age were displayed in cases, while samples of the bronze age were similarly represented. The fossils of ferns and shell fish were remarkably good, and Mr. Egginton's collection of spider fossils made a very interesting group. We were told that most of these had been collected locally at what are called the open work coal mines. The members also saw the collection of tools for splitting the fossils and exposing the contents, and it was noticed that great care was necessary to avoid spoiling what might be a very good and rare specimen.

At the close Mr. Egginton was thanked for his great kindness, and many expressed their view that this meeting had been the most interesting of all so far held by the Association.—JOSEPH PRICE, Hon. Secretary.

CUMBERLAND BEE-KEEPERS' ASSOCIATION.

SCHEME TO COMBAT BEE DISEASE.

At a meeting of the Cumberland and Westmorland Bee-keepers' Association in the Crosthwaite Parish Room, Canon Rawnsley presiding, the question of bee diseases was discussed very fully, and, guided by reports received from different parts of the county, it was decided, in the interest of bee-keepers and fruit growers, that strong measures should be taken to get rid of the "Isle of Wight" disease, which is at present rampant in several districts, particularly in the west and south of Cumberland.

The unanimous approval of the meeting was accorded to Mr. F. E. Marshall's suggestion of selecting a district which had lost almost all its bees through the disease, and destroying all hives and appliances with which diseased bees had at any time been in contact. The destruction of any stocks of bees still alive in the district, or their transference to some other infected district for the time being would be a question to be settled later. This space would be kept clear of bees for a period to be decided by experts, and, upon being restocked with bees from healthy apiaries would decide the possibilities of stamping out the disease in that way.

The Secretary of the Association has already been in communication with the Board of Agriculture, who are obtaining their expert's opinion as to the success of the scheme, and, should their reply be encouraging, a suitable district will be selected, and the proposed arrangements discussed with the bee-keepers concerned.

It is also proposed to test the immunity of one or two of the foreign races of bees by importing stocks into infected areas other than the one selected for isolation, and it is considered best that bee-keepers wishing to join in these experiments should communicate with the Secretary of the Bee-keepers' Association as to the strain they would like to adopt so that arrangements may be made for a systematic distribution.

A DORSET YARN.

Running several small holdings of fruit and flowers, one is able to value the great work done by bees, and by watching their favourite blossoms one can see the great aid they are to fertilization. Going over the breadths of gooseberries this year, as the large bushes opened their thousands of blossoms, the merry hum was just like swarming time. In this district there are very few Italians, nearly all the bees are natives, and wonderful workers they are; but even these are not all alike. The abdomens of those from the other end of this village are very black, and at this end they are brown and are of a greater width; those that are darker are more slender. When the fruit was ready for harvesting every berry seemed crammed full of seed, and by the aid of rich fertilisers they soon reached top size, and found a ready sale at remunerative prices. The fields of currants were all visited by this large army of bees. I can see the more fields there are laid down for berries the more bees I must keep to fertilise the flowers. In one of my holdings I have lines of white broom; I planted them to break the wind. With them is the red and yellow variety named Andreana, but the bees like the white variety the best. The whole time it is in flower they are always there. As each flower opens on the thousands of sprays, so the bees visit them in countless numbers.

The first sections of honey I had out in the last week in May were the best I had ever tasted; I thought it was from the gooseberries and broom. Knowing that bees were fond of turnip blossoms I left half an acre for seed; the land was in good heart, and the growth went up a great height. So many bees went for this breadth of flowers that the men did not care to go near them; the crop of seed was the heaviest and the brightest I have ever seen.

We also grow in some fields long lines of asparagus. I had never noticed till this year that bees work every blossom as they open on the feathery growth. In the hedgerows are holly trees; to see the crowds of bees on these trees when in flower is a sight never to be forgotten, they tumble over each other like they do when robbing. As you all know, holly flowers are small and very close together; it looked as if the bees were fighting for the best and most luscious moiety of honey from the blossoms.

Apples and pears are all visited by our little friends, and if the fruit is not on the trees it is not their fault; they do not seem to miss a flower. The same with some peaches I have growing in tree form, which with the plums bloom very early. Every flower seems to be visited as fast as they open, each flower one after another all day as long as the sun shines.—J. J. KETTLE.

BLURTS FROM A SCRATCHY PEN.

Over the swelling hills the cornfields have carried their rich colours where now the prickly stubble offends the foot of the gleaner, as he gathers the few stray ears of grain. I know few more glorious sights than to see, ere the harvest has begun, the wheatfield a wealth of brown such as yet no painter has caught the tint of; the barley, a silken mass, grey as to colour, and long bearded, rustling in the light winds. Over both of them the clouds seem to play an endless game, sunshine and shadow chasing each other merrily the whole day long. Glad is this to the eye, but gladder still it is to know, by that token of a bountiful harvest, by that wonderful colouring, that Nature has rewarded the months of toil, and with lavishness has poured forth her riches. More do I rejoice this year than in others which have passed that the harvest is good, because in this year of war the need is greatest. I am even tempted to believe, patriotic enough shall I say, that the almost record crops we are gathering here and in our Colonies is a sign of success, an indication given for hope and encouragement.

Our colonies now are resting. Except for a few autumnal flowers, there is nothing to tempt them to the fields, and I notice now the ivy, the last flower from which nectar is gathered, is beginning to show its pale green flower. Just before the first frosts we often enjoy this calm quiet weather we have at the moment. The year has run three parts of its course. Spring's fervour and summer's heat have now sobered down to the staid serenity of autumn. How very much like ourselves and our lives. What a charm there is in country life just now. The chestnut trees, first to put forth leaves and first to drop, are just showing the first tint of brown, and their nuts are easily to be picked out in the foliage which surrounds them by their yellow shade. The apples in the orchards look tempting with their ruddy cheeks. In the lanes the wandering children gather the blackberries, and in the fields the gun cracks out the doom of the partridge. The river flows gently now, and where in the eddy the pools are dark and deep, the chub and the tench swim lazily about. Except for the young thrush, who now makes his first musical essay, or the sweet trill of the robin just as the twilight darkens into night, the birds are silent. Or, later in the evening, the owl hoots as he flies without noise from tree to tree, or circles the meadows in the pursuit of his prey. Involuntary, the thought will arise: Is it possible that with peace like this there is a war being carried on so near at hand? And yet there has been such scenes as these in those countries whose villages now have ceased to exist. Heaven defend our country from similar fate! Why talk of war in such a peaceful journal as is ours? may be asked. I make no excuse. Is there one thing more uppermost in our thoughts.

Reports from Associations in various parts of the country show that they have a difficulty in keeping up their fervour. Is it to be wondered at? Which among them have not members who are doing their "little bit." Their absence is sure to be felt. Those who cannot go out must keep up "business as usual." Subscriptions may not flow in; fixtures may have to be abandoned. Well, perhaps so. But sit tight. Then, when the good times come again let there be as little leeway as possible to make up.—JNO. SMALLWOOD.

ECHOES FROM THE HIVES.

We have just finished extracting and bottling our honey. It is very thick and dark; the take is good—412lbs. from twelve hives. We had swarms from three stocks; the first we found in an apple tree, so hived it separately; the second

we returned to parent hive after cutting out the queen cells; the third came out four different times, remaining in a cluster for no longer than a quarter of an hour. The fifth time they settled in two clusters, and we returned them both to the parent hive, but missed seeing the queen in both lots; the consequence was they came out again next day. As it was Sunday (being thoroughly tired of their performances) we hived them separately. All our stocks appear to be all right so far.

One of our members has 100lbs. from her two hives; in fact, all about Crosby have had good "takes." We hope we shall get through the winter without the dreaded "I.O.W." disease. — JESSIE ROWLANDS, Great Crosby, Liverpool.

MANAGING STRAW SKEPS FOR A CROP IN MODERN FRAMES.

A French lady bee-keeper of considerable experience, Madeleine Maraval, tells in the *Abeille Bourguignonne* of August how she succeeds in getting the honey crop of her colonies in straw skeps stored in movable-frame hives. She owns colonies in both skeps and movable frames. She proceeds as follows:

"My aim is not to increase the number of colonies, but to secure as much honey as possible. During April, after the spring visit I begin to move each of the colonies in straw skeps in the direction of a good colony in a movable-frame hive, a little each evening, after the flight. In this way each well developed colony on frames has near it, after a while, a straw skep, with the entrances as close together as possible.

"At the opening of the honey crop we are ready for the juggle. I proceed with it as soon as the skeps are found heavy enough to be safe by removing each skep to a new spot, in the middle of the day, when the big crop is on. There is a great flurry among the poor honey gatherers when they come back heavily loaded and fail to find their home in its place. But the flutter is of short duration; the neighbours are very accessible to those who come loaded. There is hardly a half hour of excitement, and the adoption is consummated to the benefit of the movable-frame hive, which thus doubles the number of its field workers and trebles its crop.

"As for the straw-skep colony, the only thing expected of it is to gather sufficient stores to live until the next year, when it will be made to *sulk* again."—From the *American Bee Journal.*

APICULTURE AND AGRICULTURE.

Outside of the bee-keeping world it is not generally known nor even understood that honey-bees were created, not so much for the purpose of furnishing the delicious honey for mankind, as for carrying pollen grains from one flower to another, so that these may bear fruit and seeds. The pollen is gathered by the bees from the flowers, and carried to the hives in little bright-coloured pellets on their hind legs, which many persons suppose is the wax from which the combs are built. The bees, however, must gather this yellow dust or pollen from the flowers, to prepare the partly-digested food for their young larvæ. This is absolutely necessary; and if they are unable to secure a sufficient amount of pollen, the progress of the colony is delayed considerably. In gathering either pollen or honey the bees come in contact with the pollen grains of the blossoms, which adhere to their hairy bodies, and are thus carried from one flower to another. These pollen grains thus come in touch with the stigma, or the female part, so to speak, of the next blossoms visited. Cross-pollination is thereby assured, and the thorough setting of fruits and seeds the result.

Bees are most important distributors of pollen, because they appear in larger numbers than other insects, and especially in the early part of the season. It is this reason, as well as their greater activity, that makes them more useful in this great work they help to perform, the value of which, as estimated by good authorities, is far greater to our country than the value of the honey crops. It is certain that the bees, on account of their vast numbers, visit a far larger number of blossoms, and do this work more thoroughly than other insects.

THE SEX IN PLANT LIFE.

Sex in plants or flowers exists very much as in animals, and it is just as necessary for fertilisation to take place before fruit or seeds develop. In many plants the male and female exist in the same flower. In others the male is found in one and the female in another flower of the same plant, while in still others each sex is found in the flowers on separate plants entirely. No matter what the arrangement, however, it is necessary that the pollen grains from the anthers of the male part of one blossom ripen earlier or later than the stigmas, so that self-fertilisation is prevented, and the bees carrying the pollen to the other blossoms in the right stage to receive it effect and complete the fertilisation, after which the development of fruit and seed follows. Without this pollination the blossoms would wither and die instead of bearing fruit.

SOME STRIKING EXAMPLES.

During the most favourable weather conditions the pollen grains may be blown about by the wind, and pollination of the blossoms take place so that fruit may be borne. But even under such conditions the bees play a great part in making the work more thorough, as they visit many flowers and blossoms that may not be reached by pollen driven by wind. It is well known that such ideal weather conditions do not always exist; and during such conditions, when the weather is damp and the pollen sticky, the wind does not blow it about so easily, and it is then that the insects, and especially the bees in their large numbers, play the most important part in the crop of fruit and seeds that will be harvested. Where certain varieties of plants or fruit trees are isolated from others of their kind, and when there is a great distance between them, the chances of pollination are not certain, and the bees must be depended upon to carry the pollen from one to another. Where bees are not present, and the wind only depended upon, there are instances on record of trees that bore no fruit on the windward side, but an abundance on the other side. The presence of bees would have ensured the pollination of the blossoms on the windward side, and a better setting of fruit on all parts of the tree.—LOUIS SCHOLL, in the *S.A. Bee-keepers' Journal*.

ANGRY BEES.

I have been acquainted with practical bee-keeping for just on thirty years, but it was left to the South African bee, only some four years ago, to open my eyes as to what the anger of bees really meant. Let me recount a little of what happened on that occasion. It may serve as a precaution to others not to tackle too lightly bees they have not handled before. I was asked by a friend to transfer a stock of bees from a box to a frame hive. I had performed a similar operation a short time before for a neighbour of my friend's, and the result pleased him so much that he thought he would like a frame hive also. I drove out to his place in the morning, a distance of sixteen miles, and immediately set to work. Approaching the hive, I could see the bees' temper was not of the best, so I applied the smoker pretty freely before the bees were even aware of my presence, but smoke had no effect whatever, although I persisted in using it freely. I only got the length of removing the ubiquitous sack, one of many, when I saw it was an utterly hopeless case. In less time than it takes to tell the air was full of bees, my hands and arms one mass of stings, and a crowd of bees darting at me to get their turn in early. The hive was some sixty yards from the house, yet I could see that the bees had already commenced war on everything within reach. Two dogs, tied close to the hive, were performing evolutions foreign to even the most playful puppy. These were soon liberated, one of them bringing a cloud of bees into the house, the other taking advantage of the occasion to pay a visit to a neighbouring farm, where he remained that day. To give even a brief description of that day's happenings would take more than a whole article. Those bees killed fourteen hens. They would have killed double that number had I not got them inside. All the inmates of the house were kept close prisoners all that day—to open even the doors meant filling the house with a crowd of angry bees, which attacked everything living. I sallied forth regularly to pick up the fowls that were too exhausted to escape, and took them inside to be treated. I had on a good veil, which kept my face fairly free, but my hands and arms were one mass of stings, so much so that I scraped them off with a knife. To conclude, I was obliged to wait for the shades of night before I could enter the stable to get the horse to take me home.

That was the only time I suffered defeat in the apiary, and it has had its lesson. Apart from this I have found the South African bee very easy to handle, and quite as amenable to manipulation as any other bees.

For the benefit of those troubled with vicious bees, I would say with the editor, get rid of the strain by introducing queens of a quieter strain, and stick to any particular colony that shows an amiable disposition for breeding all your queens from. I have found this trait very strong in South African bees, "like breeds like," and have always taken advantage of it, till now handling my bees at all times is a pleasure. It has been stated that good working qualities and docility are seldom combined, yet I have found my quietest hives have beaten all others in honey gathering for the past four or five seasons. I have found bees' temper vary a good deal with the weather, and it is well to take advantage of this fact. Dull cloudy weather is not good for them, and neither is a long spell of hot dry weather. A bright day, with little or no wind, a few days after rain, is ideal for opening hives of cross bees. Sometimes I find them best tempered in the morning, but not always. Again it is often a good plan to open a hive that has a bad reputation late in the afternoon, as the friendly shades of evening

draw a veil over the scenes if anything untoward happens.

I have often found that by closing a hive up when it showed signs of becoming unmanageable, and opening it the following day, that everything goes on smoothly. Always avoid getting your bees worked up to a stinging fury—the point when their only aim and object in life is to punish you. They won't soon forget it, although they may and will forget that you quietly retired from a slight attack the day previously. Very often it is the jar that should not have occurred when you lifted the cover, or the quilt dropped back again after it was turned up, that caused the first bee to sting, or it might have been that the smoker was out of reach or not alight just at the moment when one puff would have soothed everything. If bees, instead of going down below to fill themselves when they get a taste of smoke, dart out of the hive at you it is an indication that they have not had enough. Sometimes giving a few puffs just then and turning down the top sheet for a moment has a good effect. Again, I have found that a few puffs into the entrance and a sharp knock on the outside of the hive work wonders. I never smoke bees at the entrance unless I know them to be very vicious, as it inflicts undue punishment on them. Sometimes the carbolic cloth has a greater effect for quieting than smoke, and again it may have the reverse effect. Therefore it is a good idea to have both handy. Cool, deliberate, unflinching demeanours over an open hive is essential to handling cross bees. Always practice it when handling quiet ones and it will come more natural when required. Hurry and rush about as you will before opening the hive, but never give the bees the idea that you are in the least hurry whatever. There are times when bees take note of your every movement, and are ready to punish you for the slightest slip. That is just the moment you are put on trial, and much of success or failure depends on how you stand it. Often bees that have not been handled for a long time are very upset and buzz about when the hive is opened, but they are not really cross, and after a few manipulations get quite nice to handle. Happy is the bee-keeper who knows exactly the temper of his bees and acts accordingly.

Finally, I should say if any particular hive has got into a very bad temper, and shows it constantly, try and leave them alone for a while till they have forgotten. Give them a young queen from a quiet stock. Stick to the South African bee through thick or thin and try to improve your strain every time.—H. MARTIN, in *The S.A. Beekeepers' Journal.*

PRESS CUTTINGS.

GOING INTO BEES.

As it happened, we had special reasons to be shy of keeping bees. A neighbour kept all the bees our garden really needed, and upon them we depended, not in vain. There came a dreadful day when these noxious insects took sudden offence at his wife, enveloped her in an angry cloud, and stung her with such energy and unanimity that, by common bruit, the poor lady went black all over. Our neighbour, not unnaturally, gave his bees the sack—or the sulphur—and then we found that we could get no fruit. So the local expert, a man upon whom bees crawled in ecstasies of horrible affection, was taken into council. According to him the bees guilty of the outrage belonged to a tribe known as "Eyetalian Highbreeds," notorious for abominable temper, and, generally, as far as I could make out, no better than they should be. But his bees were of quite another sort, gentle, loving, industrious; and of such an even disposition that they hardly knew what stings were made for. That seemed the very thing. Would we have an observation hive, a Somebody's patent hive, strongly recommended, and very expensive, or just a hive? Just a hive without any trimmings we thought would answer our needs. Hive a guinea. Swarm a guinea. And, thank you. The expert undertook to settle our bees in, so to speak, and in a few days behold us "commenced apiarist." That year golden visions swam before our eyes. The bees had only half a season before them, but they worked like niggers, and in a few weeks we were taking sections of our very own honey. At a shilling a section—the grocer, we subsequently discovered, had less generous views as to values—we calculated that we had made at least twenty-seven per cent. on our capital, and we had dreams of a garden filled with hives as close as they could be stuck, and of millions of laborious occupants sweating out their lives to enrich us beyond the dreams of avarice. The reality, I may say, was less roseate. It is true that our bees lived up to their reputation, and stung nobody except the dog who got into the habit of biting errant members of the community, and used to return to the house with a pensive expression, and his face swollen to three times its natural size. Presently the honey-flow ceased, winter came, and we were advised to administer sticky syrup in quantities that seemed incredible. I suppose we did not give them sufficient, or that it was not sticky enough, but, at any rate, the bees all died.

With the coming of spring we got a new lot. They were just as gentle and

just as industrious, but they developed a dreadful disease called "split-wing," against which medical science, though called in early and feed liberally, was unavailing. And so they died. It was too late to begin again that year, and, besides, expert opinion, represented by the gardener and the bee-master, were against it, so we waited until next year. Then we found that we had to lay down an entirely fresh plant, and that the new bees must on no account go into the old hive. Hive a guinea. Swarm a guinea. And, thank you. Same old process all over again, and the vision of golden profits much bedimmed. However, we were not going to be discouraged, and once more we were bee'd.

What was the matter with that lot we never found out. But they never so much as made a fight for it. The wasps raided their territories like Uhlans, and obviously regarded the hive as another Belgium. They walked in at the door as bold as you please, slaughtered any bee who got in the way, and carried off our honey by the cupful. The bees never had the sense to combine against them, and the wasps would actually chase the poor incompetent things and cut them to pieces in the air. It was a brutal spectacle, and we were perfectly helpless to rescue our unhappy serfs. The catastrophe was complete, and when one day we opened the hive in despair two bees —two languid, despairing bees, who were evidently only waiting for the end—were all that was left to us out of about thirty thousand.

That finished us as apiarists. Under the word "bees" a line was drawn in the household accounts, and the painful subject was avoided by common consent. But the hive was left in its place. In the middle of the following summer the gardener announced that strange things were happening within it. Bees were arriving in twos and threes, armed, if I may so express myself, with brooms and dusters, and really wallowing in the most tremendous spring cleaning ever beheld. "Mark my words," said the gardener, "there's bees as 'as got their eye on this 'ere 'ive, and is a-gooing to take persession." We did mark his words, and saw his prophecy fulfilled. A magnificent swarm settled on a bush close to the hive and waited to be inducted with the proper forms. For all I know they are there yet, but that was the year we sold the house. We are off bees.—From *The Globe*.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith Correspondents are requested to write on one side of the paper only.

TWO QUEENS IN A HIVE.

[9031] When taking the honey from a strong stock of bees belonging to a neighbour, we found both worker and drone brood in the centre of two boxes of shallow frames in five combs in all. These we replaced in one super, and extracted the honey from the others and returned all to the hive to be cleaned up. We looked carefully for a queen, but failed to find her among the shallow combs, so looked down below and found there a small queen, so came to the conclusion she had been able to get through the queen excluder and back again, as she was then laying very well in the brood chamber. A few days ago we went to see if the shallow combs were clean, but found them again well stored with honey sealed over. What puzzled us was to find the enclosed queen in the super box, but no eggs or larvæ. The queen below was still laying well, and as we saw her twice there could be no mistake about there being two queens. We would like your opinion, as this is our first experience of two queens in one hive.—J. R.

Reply.—The old queen had by some means gained access to the supers and remained there. The bees on the brood combs have reared another queen, which has mated, and returned to take up maternal duties in that part of the hive.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

X. X. X. (Abergele).—*Detecting Adulteration of Honey.*—The only method is by polarisation.

Staffs. Bee-Keeper (Stone).—*Disposition of Bees.*—Both are natives, different colonies of which, like all other races, vary in disposition.

Woodno (Ross-shire).—*Identification of Bees.*—They are one of the varieties of Leaf Cutter bees. A most interesting history of these bees has recently been written by Henry Fabre. A translation was printed in the *English Review* of March last. There was also an article on the Leaf Cutter bees in *Pearson's Magazine* for August, 1914, written and illustrated by photographs by Mr. Harold Bastin.

A. S. Douglas (Durham).—(1) No. (2) Yes. (3) We are afraid such favourable localities are somewhat rare; we do not know of one.

Honey Samples.

M. Griffiths (Llandrindod).—The honey is fairly good. The flowers from which it is gathered cause the colour to be dark. We are unable at present to say from what source the honey was gathered, but if possible will let you know later.

Suspected Disease.

D. Bentley (Yorks).—You did not give any name on the box of bees to enable us to identify it, but the bees in the one we take to be yours are affected with "Isle of Wight" disease.

M. Bradly (Bath).—The bees are suffering from "Isle of Wight" disease. The wasps would be carrying off the dead bees to their nest as food for their larvæ. You would need a good microscope with a high power objective and some skill in using it to be able to identify *Nosema apis*. If you have not the supplements to the Journal of the Board of Agriculture, Nos. 8 and 10, you should get them. No. 8 is 1s., and No. 10 4d. post free, from the Secretary to the Board of Agriculture, 4, Whitehall Place, London, S.W. The chapter on diseases in the Guide Book will also give you the information you require.

W. Miller (Gloucester).—The few larvæ in the bit of comb sent were affected with Black Brood.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

October 19th to 22nd, at Royal Agricultural Hall, Islington, London, N.—British Dairy Farmers' Association Annual Show. Classes for honey. Schedules and entry forms from the Sec., F. E. Hardcastle, 28, Russell-square, London, W.C. **Entries closed.**

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not admissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 8s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

EXTRACTOR wanted, cheap, good order.—RECTOR, Tothill, Alford. v 83

APPLES, large cookers, 12s. 6d. cwt.; Pears, 1s. 9d. stone; exchange bee goods.—MACE, Stow, Kimbolton. v 88

FIRST grade clover sections, 9s. doz.; 6 doz., 8s. 9d.;; 1 gross, 8s. 6d.; 2 gross, 8s. 4d.; screwcaps, 9s. per doz.; packed on rail.—BARNES, Clegger, Wigton, Cumberland. v 98

LIGHT honey, fine flavour, 62s. cwt.; sample, 2d.—ANDREWS, Rock-rd., Peterborough. v 97

WANTED, honey extractor, in good condition, cheap.—READ, 13, Park-rd., Gravesend. v 95

EXCHANGE 6 Houdans and cock for stock of bees or two nuclei; old English game cock and hen for nucleus or skep stock.—BECK, Airton, Leeds. v 93

PURE run honey for sale, from fruit and clover sources, delicious flavour.—RICHARD, Summerhill, Headcorn, Kent. v 94

VIGOROUS 1915 queens, 3s. 6d.; six dozen medium honey, screw-tops, 9s. 6d.; early Buff Orpington drakes, Cook's best, 4s.—WARREN, Terrace, Hathern. v 92

HALF-TON honey for sale in 28lb. tins, 15s. 6d. each, tin included; also 120 screw-cap bottles, 9s. per dozen, first grade; cash or deposit.—OLIVER, Worthen, Shrewsbury. v 91

GENTLEMAN, with considerable bee breeding apiary desires change of location, would be glad to learn of suitable accommodation for self and same up to 40 miles west of London.—Address, WESTERN, c/o "B B.J.," 23, Bedford-street, Strand, W.C. v 90

APIARY of 10 healthy stocks for sale, either as a whole or separately; can remain on present site if desired.—W. H. SIMS, Cole Bank-road, Hall Green, Birmingham. v 86

HONEY extractor wanted.—Particulars to THOMAS WEDGWOOD, 24, Culverden-road, Balham, London. v 82

WANTED, for dissecting purposes, old worn-out or otherwise useless queens, alive.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

HONEY, finest light extracted, 60s. per cwt.; two gross screw caps, 8s. 6d. per dozen; heather, 9s. per dozen; sample, 3d.—PHILLIPS, Kirkbridge, Carlisle, Cumberland. v 74

WANTED, well filled clean sections, any quantity; state price.—KETTRIDGE & ACOCKS, Sudbury, Suffolk. v 65

FOR SALE, shaped skep floor boards, and stands for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd, 4th, 5th.—HERROD, "B.B.J" Office, 23, Bedford-street, Strand, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR DRIVEN BEES.—Rapid feeders, Canadian, to take 10lb. syrup, 2s. 6d. each; a gross dovetailed Standard frames, 10s.; two dozen bottle feeders, 1s. each; Porter bee escapes, 1s. 6d. each; slotted separators, 6d. dozen; drawn out shallow frames, 4s. 6d. dozen.—Box 10, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

DRIVEN BEES for sale, 1915 queens; bar frame stocks, 1915 queens; also 1915 queens; all absolutely healthy.—Particulars from JOHN HUNTER, Craighead, Abington, Lanarkshire. v 84

HEALTHY, strong lots of driven bees, 7s. 6d. each, carriage paid; crate returnable; cash with orders.—G. A. GILLETT, Moreton-in-Marsh, Glos. v 85

QUEENS; young queens from vigorous, healthy skeps, 2s. 6d.—C. PARISH, Addington, Surrey. v 87

SUCCESS upon success; prevent "I.O.W." by using my remedy in winter feeding; queens more prolific, bees stronger, and repeat orders, 2s. 6d. post free.—A. TROWSE, 51, Eade-road, Norwich. v 89

DRIVEN BEES, 1s. 2d. lb., with 1914 queens, boxes 6d. extra.—F. HARRISON, Poultry Farm, Pickering. v 96

HEALTHY driven bees, with queen, a few lots at 3s. 6d. each to clear, boxes returnable; also about 1 cwt. inferior extracted honey in bulk at 48s.; sample 3d.—T. PULLEN, Ramsbury, Hungerford. v 99

CHOICE honey wanted, light in colour, in lots of not less than 2 cwts.; also sections.—Quote price to STANDARD HEALTH FOOD CO., Reading.

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d. post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 41

SECTIONS, run honey, and beeswax required.—ROWE, 6, King's-road, Cardiff. v 72

GREAT success in feeding for stimulating—for storing—and prevention of I.O.W.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex.

SECTION Glazing, best quality English made lace strips, 7d. per 100; lace bands, 3in., 1s. 3d., post free.—W. WOODLEY, Beedon, Newbury.

ITALIAN queens, young, fertile, return, 5s. each.—OLIVER KNIGHT, Epney, Stonehouse, Glos. v 67

1915 PULLETS for sale, all popular breeds, from noted strains for winter laying; birds on approval; free catalogue.—DOLLIS PARK POULTRY FARM, Church End, Finchley v 29

WANTED, sections, first quality, prompt cash; over twenty years' advertiser in "Journal."—CHILTON, Southdown Apiaries, Polegate, Sussex

BRICE'S BRONZE MEDAL QUEENS (23rd season), special 5s. 6d., selected 4s. 6d., guaranteed.—BRICE'S APIARIES, Green-street Green, Orpington, Kent.

WAX CRAFT:

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ITS HISTORY, PRODUCTION, ADULTERATION, AND COMMERCIAL VALUE.

By T. W. COWAN, F.L.S., &c., &c.

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BRITISH BEE JOURNAL & RECORD OFFICE,
23, Bedford-street, Strand London, W.C.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country; also if killed or wounded.

We print below a further list of names already sent in. We shall be pleased to have other names as soon as possible.

Rev. W. O. Leadbitter, D.C.L., West Walton Rectory, Wisbech — Chaplain 2/4th Leicester.

Lieut. A. C. H. Eales, The Laurels, Tiverton—Indian Army, now with the King's African Rifles, Somaliland (son of Mr. C. L. M. Eales, on the council B.B.K.A.).

2nd Lieut. Vere Warden, Netherfield, Crowboro'—R.F.A.

2nd Lieut. R. J. Haye, London Road, Luton, Beds.— 3rd Beds.

Sergt. A. Geater, The Abbey, Leiston, Suffolk—3/4th Suffolks.

Sergt. W. H. Mellors, Norton Cuckney, Mansfield, Notts.— Sherwood Rangers Yeomanry.

Cpl. E. J. Brown, New Alston, Haydon Bridge—1/4th Northumberland Fusiliers.

Cpl. Mitchell, Police Station, Paxton, Berwick-on-Tweed—1st Black Watch.

Lce.-Cpl. D. E. Geater, The Abbey, Leiston, Suffolk—1/4th Suffolks.

Gnr. J. Lamont, Kingarth, Bute—4th Highland Mountain Brigade.

Pte. Jas. Stringer, Garden Cottage, 87, Church Road, Altofts—1/4th K.O.Y.L.I.

Pte. Jas. Gladding, Bingfield Coolridge —Royal Flying Corps (a local secretary Northumberland B.K.A.).

In the list published last week a short line between the names of Pte. Thos Gordon and Lieut. K. O. McLeman was omitted, only those above the line being members of the Northumberland B.K.A. This week we give several letters which we think will interest our readers.

"At your request for names of bee-keepers serving their country, I have pleasure in forwarding you the name of my son, who is all right up to the present. He is an enthusiastic bee-keeper same as myself. I have been among bees all my life, and have been a reader of your BEE JOURNAL for over thirty years, just a little before you took over the editorship. I have also taken the *Record* for many years.—I am, sir, yours very respectfully, JACOB BROWN,
New Alston."

"I see by the *B.B.J.* that you are forming a Roll of Honour of bee-keepers, I take the privilege of sending you the name of Lance-Corporal Thomas Dunlop, 1/5th K.O.S.B., killed in action at the Dardanelles on July 12th. He was a promising young bee-keeper, and before enlisting into the T. F. he resided with his father, John Dunlop, Raefield, Sanquhar, and was engaged as a miner at Gateside Colliery. J. SCOTT."

"Perhaps you would include my name in your list of bee-keepers serving their country, as it is very rarely you find a sailor bee-keeper. I took part in all the early bombardments of the Belgian coast, when the warships checked the German advance down the coast. We were also in at the kill, in the destruction of U8 submarine off Dover. Of course, while I am away my wife has to look after my bees, assisted by a neighbouring bee-keeper. I hope you will excuse this writing as it is most difficult to write on board a destroyer on account of the vibration of the machinery; at high speeds it is impossible. I take the *Bee Journal* regularly, and always look forward to its arrival. Wishing you every success.
J. P. WELLS,
Chief E.R.A.
Tranby Croft, Wykeham Road,
North End, Portsmouth."

"As you are asking for names of bee-keepers for a Roll of Honour, I send the name of my husband, Pte. W. E. Croft, 1st Batt. Royal Welsh Fusiliers. He was killed in action on May 16th. He went out early in November, and was in many engagements, and came through without a scratch until the battle of Festubert, when he was killed outright. I am still keeping the bees and hope to manage them all right. I have five stocks, and I have had quite a lot of honey, but the last lot is spoiled with honey dew. I

take the *B.B.J.* every week, and find many valuable hints, as I am the only bee-keeper here, and I have only books to go by; but I have started a young man this summer, as it is so much more interesting to talk about them. My husband was so keen, and intended going in for showing. Perhaps I will some day. We started with a swarm the year after we were married, that is five years ago—five years' perfect happiness. Now I have to pay for it, and what a price—a life of loneliness. Wishing our *Journal* every success.—I remain, yours truly.

CLARA CROFT."

"You might put me in the list of bee-keepers. I have the *Journal* forwarded to me regularly so as to keep in touch with things. So far I have only noticed one apiary out here, though there must be plenty in the neighbourhood.

Bombardier W. A. MUSK, R.G.A.,
B. E. Force, France."

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, September 16th, 1915. Mr. C. L. M. Eales presided until the arrival of Mr. W. F. Reid, who then took the chair. There were also present Miss M. D. Sillar, Messrs. G. J. Flashman, E. Watson, J. Herrod-Hempsall, J. Smallwood, J. B. Lamb, A. G. Pugh, G. W. Judge, G. S. Faunch. Association representatives: Messrs. G. R. Alder and G. Horscroft (Essex), G. Bryden (Crayford), and the Secretary, Mr. W. Herrod-Hempsall.

Letters of regret at inability to attend were read from Mr. T. W. Cowan, Sir Ernest Spencer, Rev. F. S. F. Jannings, Mr. F. W. Harper, and Mr. H. Jonas.

The minutes of the council meeting held on July 1st were read and confirmed.

The Rev. T. Tood was elected a member of the Association.

The Buckinghamshire Association applied for affiliation and were accepted.

The report of the finance committee was presented by Mr. Smallwood, who stated that payments into the bank had been made as follows:—June £32 15s. 2d., July £11 11s. 6d., August £1. Payments made in June amounted to £55 6s. 2d., and those now recommended amounted to £74 15s. 10d. The balance at the bank at the end of August was £181 9s. 11d.

Reports on preliminary examinations held at Nottingham, London, Bristol, Swanley, Henwick, and Ipswich were presented, and it was resolved to grant certificates to the following:—Misses E. Whyte, A. Stevens, E. Gillett, D. Watkins, M. Norwood-Smith, S. Monck, E. Trouton, R. Horsnail, D. Exley, A. Dalgliesh, E. Eagle-Bott, G. Williams, O. Nash, P. Hume-Spry, D. Gaisford, F. Canton, M. Lankester, M. Baur, E. Baur, A. Stein, B. Romers, J. Powers, D. Leeper, M. Bayley, E. Johnston, N. Welsby, G. E. Waller, N. Laurence, J. Wilson, and A. Tredgett. Messrs. S. H. Smith, P. P. MacPhail, J. Fyfe, W. E. Moss, R. E. Wilson, E. Hull, R. J. Overton, J. W. Freeman, A. Geater, A. A. Knappett, H. W. Richardson, W. H. Hudson, J. E. Death, and J. Head.

It was decided not to hold a conversazione this year during Dairy Show week in October.

The intermediate examination was fixed to take place on either November 26th or 27th.

It was resolved to send a letter of congratulation to General Botha, who is a vice-president of the B.B.K.A.

Preliminary examinations were applied for by the Glamorganshire and Cumberland Associations, and both were granted.

Next meeting of council, October 21st, 1915, at 23, Bedford Street, Strand, London, W.C.

A SOLDIER'S NOTES.

We have received the following letter and photo from Mr. J. Pearman, sent to him by one of our gallant "territorials, Pte. E. E. Bull, of the Notts and Derby Regt.

Dear Sir,—I have been amongst some bee-keepers in Hampshire, where there has been a great deal of that "Isle of Wight" disease going about. I have learnt a great deal about it there, and also in the first place by having had it amongst my own bees at home some time ago, as you know, when I called upon you to come up and judge for yourself, and you certified that it was the "Isle of Wight" disease that my bees were affected with. I must say that it has proved a means of great knowledge to me to go amongst strangers down here whose apiaries have been affected with it, and to prove to them that they had the disease in their hives. I have made myself quite popular with some bee-keepers in Hampshire, and found some good friends. Well now, I have the pleasure of sending you a post-card photograph of one of the affected stocks which one of our bee-keeping friends took for me, and I thought that it would be of interest to you if I sent you one. I must also say that I was pleased to see your name appear in the bee paper amongst the first and second prize-winners at the Show of this year. I told one of my bee-keeping friends who

you were, as he said he had often noticed your name appear in the paper, but he has never had the pleasure of seeing you. I must close this letter to you, wishing you many more successes in shows to come in future years.—E. E. Bull.

PHOTOGRAPH OF A CASE OF "ISLE OF WIGHT" DISEASE SENT BY PTE. E. E. BULL.

WITH THE BEES AT THE FRONT.

(*Continued from page* 316.)

THE EMBARKATION.

It was on August 12th, 1914, that I embarked with my regiment, the 1st South Wales Borderers. We disembarked without mishap, and after a rest of a few hours we marched through the town and arrived at our camp on the top of the cliffs at 5.30 the following morning. Although it was only just breaking day as we came through the town, the windows above the shops and cafés were crowded with people, most of them still clad in their night attire, but anxious to catch their first glimpse of the English soldiers and to shout out a welcome, which at that time very few of us could understand. Of the few days that we stayed at the camp I have very little to say, only that the weather was extremely hot and we experienced a most violent thunderstorm one night which threatened to carry our tents away. The people also made a great fuss of us and treated us very well during our few days' stay there.

We entrained again on Saturday, 15th August, and made a twenty hours' journey

IN CATTLE TRUCKS.

This was naturally rather trying, but the novelty of the country which we passed through and the fact that we were going to meet the Germans made us forget, to a certain extent, the rather trying experience of representing a box of sardines. We were not sorry the following day (Sunday) to arrive at our destination, a little village in northern France called Etreause. Here, after disentangling ourselves, we all indulged in a good stretch, which enabled our bodies to once more assume their natural proportions, and then after a rest of a few hours, during which time many enjoyed a bathe in a swift little trout stream, we marched eight or nine miles in the most drenching rain that I have ever experienced to another little village called Leschelle. It was during our few days' stay at this place that I caught sight of the

FIRST FRENCH APIARY,

if it could be called such. It was really a two-storied bee house, such as I afterwards found out to be quite common in this part of the country, and which contained several skeps of bees, which were working well.

(*To be continued.*)

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

A SWARM IN BELGIUM.

[9175] From a letter by one of our Tommies formerly with me who has now been at the front just a year, I cull the following, which may be of interest:—"There are not many bee-keepers out here. One day I saw a swarm outside a Belgian farm, and it was rather a queer way how they hived them. There were about six Belgians with old tin kettles banging them against each other."

Whether the six Belgians were banging each other with tin kettles, or banging the tin kettles together, or banging bees with bees is perhaps not quite clearly expressed, but we can well understand and picture the scene. We have been told by authorities that the tin kettle accompaniment to swarming was an assertion of ownership in accordance with the ancient law of following a swarm, and not an attempted aid to a settlement of the bees in question; but do the bangings of six Belgians undermine the authorities? or did the same law as to ownership of followed swarms exist in Belgium as in this country? In other words, were the six Belgians saying, "We give notice this is our swarm; we have it in view?" or were they saying, "Be charmed with our sweet music, gentle bees, and elect to settle here?"—F. GORDON.

WASPS *v.* BEES.

[9176] There has been war in my apiary. The wasps began to rob with a zeal which a Crown Prince might envy. Then with a strategy worthy of a commander-in-chief they brought their big battalions to bear on my weakest colony, utterly annihilating it. The next hive was attacked with such violence that I used asphyxiating gas (cyanide of potassium) and so destroyed foes and friends alike. But other armies advanced, and after closing up the entrance of the hive to almost its utmost limit, I set bottles of syrup and wasp traps about, by which I destroyed thousands. Sometimes I try sniping by kneeling down and picking off individual wasps as they enter, thus by attrition I have reduced the enemy, and the bees seem to be gaining the mastery. I have no doubt my experience has not been unique and others must have suffered in a similar manner. Can any bee experts inform us how to guard against such losses in future?—A. G. C.

SULPHUR AND "ISLE OF WIGHT DISEASE."

[9177] The following may be interesting:—I had a stray swarm of bees last July. They were hived on some clean combs filled with honey, which some bees which had died from the "Isle of Wight" disease had left the previous year. A few days after my stray swarm had been hived they developed "Isle of Wight" disease in a very acute form. I decided to destroy them, and for this purpose I used flowers of sulphur, which I burned in the smoker and blew the fumes in the hive entrance. I brushed out all dead bees, then closed up the entrance. A fortnight afterwards when I opened the hive I discovered that the combs were full of live, healthy bees, and they are now getting stronger every day. I am wondering if the sulphur has killed the disease, and should much value your opinion.—GEORGE BRITCHER.

[We cannot say, but time will tell. We shall be pleased to hear how the stock fares next season.—EDS.]

A NOTE FROM SCOTLAND.

[9178] I have got a good start in bee-keeping once more. There is no disease in our village. One stock in the village in a straw skep did not contract the disease; it swarmed three times. The man lost the first and second swarms, but the parent hive and third swarm are doing well. The bees at the farm, 800 yards from my apiary, have done splendid. Is it not rather exceptional for even three stocks to survive? We lost 265 stocks, and our neighbours lost all. Four apiaries from four to six miles up in our hill country have kept healthy, and are as good bees for temper and honey gathering as I have ever seen. I have sixteen stocks at present, none of them in the apiary. I set them up in a

field. I have as many sealed combs as will set up twelve stocks, and I am getting the driven bees from the same locality. This has been the best honey season in twenty-five years, and swarming has been extraordinary; one strong hive threw three swarms, the top swarm from that casting two swarms. We found a small swarm on August 14th, it had a mated queen of this season, and it is going to make a good stock. I put it on combs and gave it one frame of brood and eggs. There were bees came to a place near here last year (all their bees were dead) and went into the roof of a milkhouse, and they have swarmed three times.—A. MUIR.

SUFFOLK B.K.A.

A LECTURE ON BEE PLANTS.

"Some good bee plants and how the nectar is obtained" formed the subject of a lecture delivered by Mr. T. Payne on Tuesday evening at the monthly meeting of the Suffolk Bee-keepers' Association. Mr. J. B. Chevallier, the Chairman of the Association, presided. The lecturer mentioned the chief honey-yielding plants found in East Anglia, giving the approximate times of flowering of each kind and their relative values, from the bee-keeper's point of view. He also explained how the bees extracted nectar from the flowers, and described the part which nectar played in the economy of Nature by inducing bees and other insects to act as fertilising agents for the flowers; and he gave it as his opinion that bees were attracted to flowers more by the smell of the nectar than the colour of the bloom. An interesting discussion followed the lecture.

The Hon. Secretary of the Association, Mr. Oliver C. Jones, referring to his appeal for honey for the wounded, stated that he had just delivered a first consignment to one of the Red Cross Hospitals in Suffolk, and was looking forward to further donations to enable him to keep up the record of last year, when he collected about 1,000lbs. of honey for the same purpose.

BEE-KEEPING IN QUEENSLAND.

The Queensland apiarists are inquiring as to whether it is profitable to grow honey-bearing plants solely for the benefit of bees. Experiments have been made in order to ascertain if this can be successfully done, but from the various experiments which have been carried out very few have met with success. It was a somewhat difficult matter to grow a plant which would serve two purposes—provide honey for the bees and be of commercial value. Australians claim to have discovered a plant which will serve the double purpose. They have found that sweet clover more than fulfils anticipations in this respect. It is a valuable honey-bearing plant, and irrespective of its value in making provision for the wants of the bee, it is exceedingly valuable as a fertiliser of the soil, as well as providing nutritious fodder for horses, cattle, swine, and sheep. In the introduction of nitrogen-gathering bacteria it is said to be invaluable, so it may justly lay claim to be a plant of various uses. It is not essential to sow the seed in rich ground; it will thrive on land where other plants would languish, and not only thrive on poor ground, but the soil would eventually be enriched by its growth. Another advantage to be gained is its drought-resisting qualities, and from information obtainable it appears to be very suitable for the climate. Independent of its value as a green crop for cattle, a good return is realised for the seed, and if handled for hay, provision may be made for stock in times of drought. The Australian journals have commented on the introduction of sweet clover, and remarkable success has been achieved. In Western Australia a trial of the seed was made in raw white sand, and it was found that this was changed to an almost dark rich loam capable of maintaining one steer to the acre from September to January. It was found that it yielded nearly two tons of nutritious hay to the acre.

PROSPECTS OF HEATHER HONEY.

The reports to the Board of Agriculture for Scotland on the condition of stocks and the yield of honey show considerable variations. In Caithness, Ross, Inverness, Moray, South-West Aberdeen, Fife, Stirling, and Berwick, the bees are strong and healthy, as are also most of the stocks in North-East Forfar, North Ayr, and Wigtown. "Isle of Wight" disease is, however, present to some extent in the three last-named districts, and in some parts of Aberdeen, while serious loss has been caused by the disease in Kincardine, East and Central Perth, Dumfries, and Lewes and Harris. Owing partly to the depletion of stocks and partly to unfavourable weather in July and the early part of August, the yield of honey will, on the whole, be under the average.

In Ross-shire clover gave good results, but heather honey is not so plentiful, and the same is the case in North-East Forfar. In Inverness, Moray, Fife, Stirling,

Berwick, North Ayr, Kintyre, and Bute, the yield will be at least an average one, while in Wigtown there was a good yield of clover honey, and the prospects of heather honey are excellent. Poor yields, on the other hand, are reported from Caithness, Sutherland, Banff, Aberdeen, Kincardine, East and Central Perth, and Dumfries.

HOW TO DEAL WITH BEES WHEN ROBBING.

The capabilities of a bee-keeper are severely tried when a serious case of robbing has to be dealt with. Unfortunately, the trouble may be caused entirely outside his own apiary, say as a result of some other bee-keeper leaving honeycomb about, or thoughtlessly throwing away freshly cut-out queen-cells. At times robbing ensues through combs being exposed too freely when manipulating stocks, or through giving combs from the extractor to be cleaned up during the day time, especially at the end of the honey-flow, when trouble in this respect is set up very easily.

There is no difficulty in recognising a genuine case of robbing. The bees frantically endeavour to enter other hives than their own, not only by the proper entrance, but through every hole or crevice, even when there is no possibility of gaining admittance. Incessant fighting goes on in front of the hive, the assailants being vigorously opposed by the assailed, unless the latter are weak in numbers, in which case they sometimes give way and allow their combs to be emptied of honey, probably leaving their hive to follow the robbers.

When a serious outbreak of robbing occurs the bees are exceedingly cross and use no discrimination in their attacks, stinging anything or anybody coming in their way, even the clothes of the manipulator or of persons in adjacent gardens; and they seem to revel in getting entangled in the hair of a lady, where they do little damage, but cause no end of fright. At such times bee-keeping is liable to fall into bad repute, and those who have taken the precaution to insure against liability to other parties for injury caused by bees to either persons or animals experience a relief which it is difficult to exaggerate. If animals are near to the hives that are being robbed they are almost sure to be stung, for the slightest movement—the flapping of a fowl's wings or the whisking of a horse's tail—will attract a few frantic bees, which will soon be joined by a large number of others.

Robbing is very demoralising, a whole apiary being sometimes disorganised by thoughtlessness or carelessness on the part of the bee-keeper. The robbers seem to induce bees that are usually industrious to adopt dishonest practices, and numbers of them as a consequence endeavour to obtain illicit sweets from any hive, more especially from those that contain weak stocks, freely sacrificing their lives in their unlawful efforts.

To deal with such a case immediate measures are required, and the sooner they are adopted the less trouble will there be. The entrance of the attacked hive should be so contracted that only one or two bees can enter at a time, or a good handful of straw or weeds may be placed loosely before the entrance, and be well sprayed with water. As the excitement seems to cause more and more bees to take part in the assaults, efforts must be made to prevent them from congregating in clusters on the hives. A feather dipped in a strong solution of Calvert's No. 5 carbolic acid will be found useful for painting parts of the hive that are covered with bees, such as corners, crevices, and ventilation holes; and the greater part of the alighting-board, as well as the front of the hive, may be well wetted with a weaker solution of the acid.

The attacking colonies may be recognised by sprinkling flour from a dredge over the bees congregating about and leaving the hive that is being robbed, for the tell-tale bees will then be found as they are entering their respective homes. But, as a rule, the colonies engaged in robbing can be told at a glance, for the bees will be entering and leaving the hives with unusual rapidity. Some good may result from giving the hives of the robbers a smoking from the entrance, then placing a good handful of wet straw or weeds loosely on the alighting-board, when the efforts of the bees to enter or leave the hive will be hampered by having to make their way through the obstruction, which is so distasteful to them. When robbing is going on at several hives it is a good plan first of all to procure a watering-can with a fine rose, and to water well every hive that is surrounded by bees.

If the attacked stocks are very weak, the entrance should be contracted so that only a single bee can enter at a time, thus assisting the assailed to defend their home. Queenless and nucleus stocks are very liable to be robbed when there is a lack of nectar to be gathered, more especially in spring and autumn.

If such an accident should occur as dropping a comb of honey upon the ground through wrongly handling the frames, the fragments and most of the honey must be at once cleared away and be put out of reach of bees, then the

place must be immediately covered with plenty of mould or gravel, or be watered with a strong solution of carbolic acid. If a stock is being examined when the accident occurs, it must be closed up temporarily, so that no time may be lost in clearing away the honey-comb and preventing the bees from taking the honey; otherwise they are liable to get the upper hand, and consequently to give trouble.

The lifts and roofs should be examined from time to time to see that they fit properly, having no crevices through which bees can crawl. While such crevices may exist for a long time without being noticed, they prove most inconvenient when an outbreak of robbing arises, at which time the best efforts of the bee-keeper are required to stop the trouble, even when the lifts and roofs are all bee-proof.—J. B. L., from *The Bazaar*.

PRESS CUTTING.

A FRAUD IN WINGS.

My private feelings towards the bee are a mixture of contempt and fear. People have died from bee-stings before now, and to a hasty temper and the habit of carrying poisoned weapons, the bee adds a combination of miserliness and blacklegging which is plainly immoral in the extreme. Without fee or reward it—or must one say she?—is alleged to pile up wealth for its employer in a manner plainly subversive of Trade Union principles, and its warmest admirers confess that it shortens its life by almost a third through persistent overwork. There is no sense of proportion about a bee. I suppose the idiot has never learned that other people will gather its honey, and believes that it is laying-up stores for the hive alone. But when it has laid by investments sufficient for twenty generations of bees to live upon without doing another stroke of work, it goes on collecting honey and manufacturing wax as though starvation was staring it in the face. Take those wild bees of the Nerbudda, which makes the region of the Marble Rocks impossible for man or beast. Every now and then half a ton or so of honeycomb, black with age, falls into the river and is lost, but those ridiculous and spiteful insects continue to make honey which they will never use, and are ready to murder anybody who tries to share their superfluous wealth. How can our pastors and masters expect us to respect a selfish, avaricious brute like that?

Consider further the matrimonial customs of these fraudulent insects. The main population of the hive is composed of unhappy spinsters whose natural destiny has been deliberately thwarted by their nurses and who can never reproduce their kind. One, yet more unhappy, is reserved for that purpose and is not allowed to do anything else, except to slaughter possible rivals in the business. For her is reserved a peculiarly horrible form of death, that of suffocation. When the nuptial flight takes place she is followed by scores of drones, all, no doubt, "thinking it," as the elder Mr. Weller says, "all wery capital." It is a tremendous business, in which every drone strives to outstrip every other, and in which drones from other hives, though it is none of their business, have no more sense than to join. What do you suppose awaits the victor in this contest of lunaties? Why, to be slaughtered in mid-air by his abominable spouse. What prompts the drone, who is otherwise by far the most intelligent creature in the community, and who does seem to have some rational notion of the meaning of life, to enter for this mad race, in which the prize is death, I cannot conceive. Despite his magnanimous resolve to do nothing useful, but to live like a gentleman upon other people's earnings, he must at bottom be nearly as big a fool as his sister, who might live to be eighty days old, but almost always dies at sixty from overwork.

People make a great fuss over the bee because it is supposed to have solved some intricate mathematical problem in the construction of its cell. Some mathematician, Montalembert, I think, with nothing better to do, spent laborious hours over the bee's cell, and showed that on mathematical principles it was very nearly right. Then somebody else came along to show that the bees were quite right, and that it was the critic who was wrong, and from that day to this the bee-lovers have never ceased from jubilating over the insect's vindication. But is it anything to make a song about? At what period bees were converted to Socialism, and went into hives nobody knows, but it must have been a good many thousand years ago. In all that time the bee could not help hitting on the right shape by accident, and I don't believe mathematics had anything to do with it.

There are bees whom one can respect, but they are not of the sort that live in hives and pile up treasure for other people. Bumble-bees, nice, fat, blundering, good-tempered bumble-bees, appeal to me. They know a thing or two, they do. Just examine your snapdragons, with their lips so delicately adjusted that nothing of the insect sort except the bumble-bee will pull them down. It is odds that you will find a tiny hole at the base of some of the flowers. That is where some bumble-bee,

who did not see why he should work for the snapdragon as well as for himself, has bitten through to get at the nectar, and has dodged all the careful devices to make him dust himself with pollen in the process. You may call it cheating. I do myself. But you cannot deny that it shows enterprise, also, since the trick has been learned in the last few years, progressive intelligence. A honey-bee would never think of a thing like that. No. I will go to the ant if you and Solomon insist upon it, but not even M. Maeterlinck and all his Elberfeld horses shall drag me to the honey-bee.—M. H. TEMPLE, from *The Globe*.

QUERIES AND REPLIES.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

USING FERMENTED HONEY.

[9032] Will you kindly reply to this question in this week's *Journal* if possible? Last autumn I placed about 50 lbs. then good fresh honey in a tin. It had been in a "ripener" for a day or two. Some time ago I opened the tin, and found that it had a little sour smell, yet thinking it would pass all right I sent it to a customer by rail, and by the time it had reached him and been in the house a few days it had fermented very badly, and was quite useless for any ordinary use. Would you please tell me if it can be used for any purpose, such as making vinegar or something else?—CYMRO.

REPLY.—The only purpose it is fit for is to make mead or vinegar.

TRANSFERRING BEES.

[9033] I have had given me a strong stock of bees, but they are in two supers of shallow combs, with a sheet of queen excluder between them; they have plenty of stores. Would it be wise to put them in a hive with sheets of brood foundation under them at once, or should they be left till next spring?—A. TANNER.

REPLY.—Remove the queen excluder and leave the bees in the two supers until spring. They may then be placed above some brood frames fitted with foundation. It is too late to do so this year.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

D. DANIELS (Coity, Bridgend).—*Bees in a Tree.*—You cannot do anything with them this year. It is quite possible for them to winter. The bees in the box will need some protection. Wrap some sacking round the box, and cover with some waterproof material. Or, if you have a frame hive, stand the box inside it, and cover with several thicknesses of carpet, felt, or other warm material and replace the roof.

B. W. J. (Grantham).—(1) and (2) You may extract the honey for household use, but do not on any account feed it back to other bees. It is better to burn the combs, and then bury the ashes. (4) It is safest to melt them down. You may disinfect them by fumigating with formaldehyde. (5) It is quite possible wasps may spread the disease, but not to the extent you imagine. We cannot say more in a special article than we have given from time to time.

J. C. G. (Ireland).—Yes, it is advisable to use them. Leave the ventilator

open. You cannot do better than use the Rymer honey board.

H. EGGAR (Chard).—It is quite possible to taint honey by using too much smoke, or leaving the carbolic cloth on too long. The latter should never be left on supers in order to drive the bees down.
If you use shallow combs for that purpose do not wire the frames at all.

W. A. R. (Whithorn).—If you intend requeening it should be done as soon as possible. Izal is used for spraying alighting boards, round the entrance of hive, and the bees and combs; use a teaspoonful in each pint of water. Instructions for use are given with the other remedy.

Honey Samples.

M. GRIFFITHS (Llandrindod). — The sample is a good dark honey. The flowers from which the nectar is gathered cause the dark colour. We will try and let you know more about it later.

F. E. HALLAM (Sheffield).—The honey is good quality, from mixed sources, including Hawthorne.

"CHESTER" (Cheshire).—No. 1. From mixed sources. Mainly clover and a little ragwort; No. 2 is from fruit bloom; No. 4 mixed, mainly clover; No. 5 clover, charlock, and other sources. The quality of all these is fair, No. 4 being the best. No. 3 is old honey, fermenting, and watery, practically of no value.

"WEST PERTHSHIRE" (Perths).—The sections are spoiled by honey dew. They are worth about 8d. retail.

Suspected Disease.

L. O. (Rhosgadfan).—Both samples of comb contain Foul Brood.

"NIL DESPERANDUM" (Yorks).—It is "Isle of Wight" disease.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of August, 1915, was £20,003. From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

October 19th to 22nd, at Royal Agricultural Hall, Islington, London, N.—British Dairy Farmers' Association Annual Show. Classes for honey. Schedules and entry forms from the Sec., F. E. Hardcastle, 28, Russell-square, London, W.C. **Entries closed.**

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DRIVEN BEES, 1s. 2d. lb., with 1914 queens, boxes 6d. extra.—F. HARRISON, Poultry Farm, Pickering. v 96

CHOICE honey wanted, light in colour, in lots of not less than 2 cwts.; also sections.—Quote price to STANDARD HEALTH FOOD CO., Reading.

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GREAT success in feeding for stimulating—for storing—and prevention of I.O.W.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex.

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Highly recommended by M. T. Batten, who, in a letter to the *British Bee Journal*, November 12, 1914, stated: "I have had no further trouble since using the Gelston Cure." Mr. Davidson, Morpeth, writing on April 20, 1915, for another bottle, says: "It has kept mine free since November."

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DON'T GET STUNG when by using **APIFUGE** you can easily prevent it.

APIFUGE will also be found extremely useful for travellers in foreign countries where insect pests abound. Bottles, **1s.**, post free.

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A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of **any bee-keeper serving his King and Country; also if killed or wounded.**

We print below a further list of names already sent in. We shall be pleased to have other names as soon as possible.

ERRATA.—In our first list of names, members of the Staffs. B.K.A. should read "South Staffs. B.K.A." In our last issue Pte. Jas. Gladding's name and address should be "2nd A.M., Jas. Gladding, Corbridge."

Capt. J. H. Hadfield, Alford, Lincs.—Lincs. Regt. (Secretary of the Lincs. B.K.A.), wounded.

Lce.-Cpl. J. L. Tickell, Westbourne, St. Marks, Cheltenham—113th Co. R.E.

Lce.-Cpl. G. R. Galland, 114, Moyser Road, Streatham Park, S.W.—R.A.M.C., 1st City of London Sanitary Co.

Driver A. Henry, Park Royal, Willesden, London, N.W.—3rd Co. A.S.C.

Pte. L. Kettle, Stamford, Lincs.—R.E., now in hospital suffering from shock.

Pte. E. E. Bull, Allentown.—5th Co. Notts and Derby Regt.

I am now in hospital in England anticipating operation after just over thirteen months in France and Belgium, having arrived in France on August 11th, 1914. Had I been allowed a camera I could have obtained some interesting snapshots of apiaries at various places. There appear to be very few "bar frame" hives in use, but one apiary at a place called Zuitpeene some time ago attracted my attention, each hive being labelled it looked very neat. The bees appear to be a shade lighter than ours, and inclined to grey in colour; we have had issues of honey at times, in one lot the grubs had been crushed and included in the honey, so a taste was quite sufficient. We are having lovely weather here, and it is quite peaceful compared with some places I used to visit, especially Poperinghe, Vlamertinghe and Ypres. The latter place had a population of 17,490 before the war, and now there is not a civilian in the place, nor a roof and four walls intact. I sometimes did 80 and 90 miles a day on motor cycle to various parts, so I saw about a bit. I must now close, wishing "B.B.J." and readers success.—L. KETTLE.

REVIEWS.

The Olfactory Sense of Coleoptera. By N. E. McIndoo, Ph.D., Bureau of Entomology, Washington, D.C.—The author has been for some time carrying out investigations on the olfactory senses of insects, and this is a monograph on the same subject relating to beetles. It appeared in the *Biological Bulletin*, vol. xxviii., No. 6, June, 1915, pp. 407-458. The study of the pores of coleoptera have been carried out by the author on similar lines to those pursued on the honey bee and other hymenoptera, which we reviewed on page 339 of "B.B.J." for 1914. The author shows that there are many variations in the structure of the olfactory pores of beetles, and that these organs are very similar to those of hymenopterous insects. On the bases of the location of the pore apparatus in the integument, the olfactory organs in beetles are intermediate between those of spiders and those of hymenoptera. From his experiments on the antennæ Dr. McIndoo says, "It seems that they do not carry any of the olfactory organs, while the olfactory pores found on the peduncles of the elytra, on the dorsal surfaces of tarsi, and perhaps on the mouth appendages, are the true olfactory organs in beetles." The author discusses the investigations of Hicks, Hochreuter, Lehr, and Hauser, and points out where he is in agreement with their findings. He mentions that according to various authors the antennal organs of different beetles vary only slightly. The antennal organs of *Dytiscus* are also similar to those of the honey bee. In both of these insects the tactile hairs are of the same type. The hollow pit-pegs compare closely with the pegs of the honey bee, except the pegs have thinner chitine at the tips. This is probably on account of the more acute sense of touch in the bee. The pore-plate organs of the honey bee and the cup-shaped organs of *Dytiscus* are also quite similar. The author therefore concludes by saying, "It seems beyond a doubt that none of the antennal

organs of beetles serves as an olfactory organ, and that the olfactory pores are well adapted anatomically for receiving odor stimuli, because the peripheral ends of their sense fibres come into direct contact with the external air. The paper is fully illustrated both with figures in the text and two plates which clearly explain the details of the organs investigated.

Bolezni e vragee vzrozlich ptchel. By E. Zander. Published by *Ptchelovodnaya Gisn*, Petrograd, 1905, price 50 kopecs.—This is a translation of Dr. Zander's "Krankheiten und Schädlinge der erwachsenen Bienen," by N. O. Jakovlev-Ploxov. The book treats of the diseases and enemies of adult bees. Of course the disease in which *Nosema apis* is present occupies a large portion of the work, and the description is made intelligible by the detailed illustrations. Besides the thirteen in the text there are eight plates, chiefly from photographs. On one of the plates there is an enlarged photograph of dissected bees showing the chyle stomach; in the one stricken with the disease this is very much distended and of a milky whiteness, while in the healthy individual the stomach is much smaller and of a brown colour. Another disease named "Mucorine" is described, and an illustration is given of a bee infected with *Mucor mucedo*. "Isle of Wight" disease is discussed, as well as paralysis, and a disease which has appeared in Brazil. In the second part abnormal conditions are described, such as fertile workers, and queens laying eggs which only produce drones, hermaphrodite bees, albinos and cyclopean, or one-eyed bees. Part 3 is devoted to enemies of bees, seven different classes being described.

From the same publishers we have also received *Miod evo oupotreblenie e tzelebnia svoistva*, by F. Koriakoff.—This is an eight page pamphlet on the value of honey and what should be known regarding its use. There are various recipes for drinks and for the uses of honey in cookery and confectionery, as well as for making vinegar. The third part is devoted to the medicinal value of honey in different ailments. It would be very useful if such a pamphlet could be compiled and published in English.

Bee-keeping, by C. C. Ghosh, B.A., Assistant to the Imperial Entomologist. Bulletin No. 46. Agricultural Research Institute, Pusa.

This bulletin has been written to give practical directions to those wishing to take up bee-keeping in India. It is well written, and designed and illustrated by a number of plates and line and tone blocks; two of the plates are in colour and are excellently done. One is an illustration of honey bees comprising the Italian bee and three varieties of Indian bees; the other is of the wax moth, its eggs and larvæ. In the preface Mr. T. Bainbrigge Fletcher, the Imperial Entomologist, writes:—

"Thirty-five years ago Government inquired into the question of Bee-keeping in India and published the replies from Local Governments under the title of 'A Collection of papers on Bee-keeping in India' (Calcutta; 1883). Some time later Mr. J. Douglas brought out a small Handbook of Bee-keeping in India (Calcutta; 1884); this is now long since out of print and unobtainable. After this the subject seems to have languished for many years, although bees were kept in frame hives by a few people in some of the Hill Stations. In 1907-8 a few colonies were brought to Pusa from Simla, but these were not successful and soon died out. In 1910 and again in 1911 we imported European bees and tried these at Pusa, and in the latter year I published notes on Bee-keeping and on Wax-moth in the *Agricultural Journal of India*, Vol. VI., Part IV., and projected a further series of articles and a practical manual on the subject. My transfer to Madras and pressure of other more urgent work has delayed this, and this Bulletin has been prepared for present use by Mr. C. C. Ghosh, who has acquired some knowledge of bee-keeping mainly under my direction. It is frankly to a large extent a compilation from various excellent manuals on the subject prepared in Europe and America, but these, of course, do not deal with Indian bees or Indian conditions, nor are these books readily accessible in India; so that it has been necessary to add some account of Indian bees and of the modified form of Standard Frame-hive which has been found practically useful with *Apis indica*, the only Indian wild bee which it seems possible to domesticate in any way.

"It is hoped that this Bulletin may be useful to bee-keepers and would-be bee-keepers. There is a large scope for bee-keeping in India, especially in the Hills. The native Indian bee is common, easily obtainable almost everywhere, and easily kept in frame-hives, except that it often shows a tendency to desert the hive after a few months; a drawback is its small yield of honey, which only averages about five or six pounds per hive yearly. In orchards and similar places, where bees are required to pollinate flowers, it should, however, be well worth while to keep these bees for this end alone. Bee-keeping cannot be looked on as a source of income in India except perhaps in a few exceptional localities, and even then only in cases where the bee-keeper is a

practical expert willing and able to take the necessary trouble to attain results; bee-keeping is not a short cut to fortune anywhere, probably less so in India than in most other countries. It is necessary to say this because we frequently receive inquiries from correspondents who suppose that they have nothing to do but get a few bees and leave them to produce honey and wax, which their owner has only to collect and sell without any trouble or expense. We can only recommend beginners to start on a small scale, at first with two or three hives at the most, and to add to these only as they gain experience."

Although, as he states, the book may be a compilation from various other manuals, this is not at all evident in the writing, which is concise, clear, and written in the plainest language; even a child could easily understand it. At the same time the instruction given is full and complete, and we take the liberty of making somewhat copious extracts. The introductory chapter is especially interesting, as it gives some idea how native honey is generally put up and sold in India.

"INTRODUCTORY.

"Honey is so much prized that the idea of being able to keep bees and make them produce honey for the use of their owner possesses a charm in itself. Bees being very common in India, honey is obtained simply for the labour of gathering it. Therefore many think that bee-keeping is very simple work. It is simple enough if by it is meant giving shelter to the bees—because bees come and build combs wherever they get suitable shelters—and taking the honey when it is gathered. Bee-keeping as practised in India all over the Hills is of this description. The writer has come across hill bee-keepers, some of them four-score years or more old, and keeping bees from their boyhood, who do not know even the elementary things about bee life, and describe the queen bee as the *King*, simply directing the colony by *his* orders and not doing anything else, and the worker bees as females, who, amongst other work, produce young bees only once in the year. It is therefore no wonder that, though bees have been known to exist in India from time immemorial, bee-keeping has made little progress and has remained in the same condition for ages. Enormous quantities of honey are produced, but as no one knows how to take out the honey from the bees' combs in a pure state, it ferments soon after being gathered and is reduced to the condition of thin jaggery or molasses. Sometimes it is worse than molasses on account of its possessing a bad odour due to fermentation. This honey is stocked for sale by grocers all over India, because there is a demand for honey for medicinal and other purposes. While holding the belief that this thin syrup sold as honey is adulterated, all purchase it because better honey is not available. As a matter of fact this honey may be pure in the sense that it has been gathered from honey bees, and has not been mixed with any foreign stuff. But fermentation has produced the change and has altered the properties altogether so that it can no longer be considered as honey. This is due to its being gathered in a crude manner, so that fermentation sets in within a month or two of its being gathered. Therefore, it sells at a very low price in the honey season, at the rate of up to 8lbs. per rupee or more. People purchase and eat it. Imported honey, being gathered in a proper manner, keeps for years and is sold at a rupee a pound. It must be noted here that it is not always safe to accept all imported honey as pure. Adulteration has been carried so far that even in countries like America, where bee-keeping has made vast improvements, samples offered for sale as pure honey do not contain even a drop of natural honey in some cases. The honey that has been produced at Pusa according to modern scientific methods has been adjudged by dealers at Calcutta no way inferior but rather superior to the imported honey. This honey has been kept for years. If gathered in a proper manner there is no reason why the vast quantity of honey that is annually obtained from bees in India should not similarly keep. It can then fetch a much higher price. The honey gathered in the Hills does not go bad so quickly, and may not go bad for a considerable length of time, on account of the cold which retards fermentation. Hence the Hill honey sells at a very high price, its average rate being about 8 to 10 annas a pound. In the Darjiling Jail the honey sells at a rupee a pound, although it too ferments after some time when brought down to the Plains. Pure honey is a rarity in India, although honey is so common. For a pure stuff people are willing to pay a price of 8 annas a pound wherever offered. They consider this price very cheap. As a matter of fact, even if offered at as. 12 or more for a pound, the demand will be found more than it will be possible to meet for some time. The market is ready, but the produce itself is wanting.

"What is needed at present is the introduction of improved methods of keeping bees and a spread of the knowledge of proper methods of taking out the honey from the combs and of taking proper care of the honey. This will vastly improve the present conditions. Introduction of im-

proved methods of bee-keeping will increase the production of honey. As a concrete instance of what improved methods will do, the case of the United States of America may be cited. The old methods practised there were about the same as those followed in India. In 1850 the production of honey and wax there was together about 14,800,000lbs. The improved methods were introduced about 1853, and the production of honey alone in 1860 was about 23,400,000lbs., the wax produced in the same year being about 1,330,000lbs. In 1900 the produce of honey was about 61,200,000lbs. and wax about 1,800,000lbs. In India such results cannot be expected because the bees here are inferior in many respects to those of America. But still it is certain that adoption of improved methods will increase the production at least twofold, and with a good gathering bee the produce may be twenty times of what it is at present. Proper methods of extracting the honey and a proper care of it will save it from going bad. It can then be sold for its proper price, and a vast amount of money that is now wasted will be saved.

"Bee-keeping is best commenced with bees which are available locally because the beginner is sure to make mistakes and cannot afford to make experiments at the risk of loss. Therefore all intending bee-keepers should commence with the indigenous bees and with cheap hives made out of ordinary kerosene packing cases, which are available everywhere in India. The beginner will have a small return in the shape of honey, and, in addition, that acquaintance with bees which is essentially necessary to successful bee-keeping. He can then confidently invest money in purchasing improved races of bees without the risk of loss.

"In this bulletin an attempt has been made to acquaint the reader with the principal features of the life of the honey bee, also with the indigenous bees and the prevalent methods of keeping them. An endeavour has been made to make the aspects of bee-keeping in India clear. Detailed instructions have been given, with illustrations wherever necessary, as to the up-to-date methods of keeping and managing bees, together with plans and figures of hives and all other necessary appliances. The appliances recommended are of such a nature that with the exception of a few they will suit both the indigenous and the European bees with slight modifications in use.

"It is essential for the spread of modern bee-keeping that hives, frames, etc., which are used in it, should be of a standard size, and all bee-keepers should adopt this standard. The advantages are obvious, when the parts are interchangeable. If properly carried on, bee-keeping is sure to spread, and as in Western Countries individual bee-keepers are sure to arise who will own several dozen or perhaps even several hundred colonies. It is essential for individual bee-keepers to use materials of the same size in all hives, because it is frequently necessary to take frames of comb from one hive and put them in other hives. Similarly standardization is essential for co-operation among all bee-keepers. In India a beginning has to be made in modern methods of apiculture, and every hive that is used has to be made. It will therefore be easy to introduce any standard. It seems advisable to adopt the standard followed by the British Bee-keepers' Association. The materials are as simple as may be under the circumstances, and as there is a large demand for them, most of them are turned out by machinery, and are therefore supplied cheap. Adoption of any new standard will hinder the progress of apiculture, as there may be difficulties about their manufacture and supply. Further, if it is desired to import European bees, it will be still more advisable to adopt the European standard so that keepers of the Indian bee can also keep the European bee without any additional expenditure in materials. The British Bee-keepers' Association materials are made to suit the European bees, but have been found to be suitable for the Indian bee, with slight modifications in use which have been noted where necessary. For the Indian bee it is essential that the frames should be placed in the hive across the entrance. For the European bees they may be placed in the same way or parallel to the entrance. Therefore in all hives we place the frames of combs across the entrance, so that the hives may be used both for the European and the Indian bee.

"Further, the aim has been adaptation to prevalent Indian conditions rather than costly innovations. In many places bees are found in empty kerosene boxes and recesses in walls. Instead of discarding these kerosene boxes and wall hives, they should be converted into modern hives. Full directions are given as to how they can be thus converted."

The following paragraph will appear strange to British bee-keepers:

"MIGRATION.

"Sometimes bees naturally migrate from place to place. The phenomenon is very common in India. The entire colony leaves the habitation with the combs and settles in another part of the country in one season, returning again in another season. Thus colonies migrate from the Plains to the Hills in autumn and return to the Plains about the middle of the winter. The causes inducing migration

are probably changes in the climate, but more probably dearth and availability of food supply."

Bees in India have several enemies that are not known here. Among birds are the Bee Eaters and the King Crow. There are five kinds of wasps, and one robber fly (*Asilidæ*) has been observed to catch bees on the wing and eat them. In addition to these there are house and tree lizards and centipedes, as well as enemies more familiar to us, spiders, frogs, mice, and ants. One species of the latter (*Dorylus orientalis*) appears to be a "terror," as we are told it "sometimes gets scent of the hives and attacks the combs for grubs and pupæ in such large numbers that the bees are compelled to desert the hives." The worst enemy, however, especially in the Plains, is stated to be the Wax Moth. Further on, in the same paragraph, is an item which almost makes one envious, and more than counterbalances the rather formidable list of "enemies." It is this. "In other countries bad and infectious diseases are known which affect the brood, and also diseases affecting the adult bees. So far no such disease has been noticed in India, and it is to be hoped that they will not be introduced."

The next chapter is devoted to the indigenous bees as follows:

"THE INDIGENOUS BEES.

"In India three, or rather four, kinds of honey-bees are found.

"(1) One is the Rock Bee (*Apis dorsata*). It will appear that the worker of the Rock Bee is as big as the queen of the European Bee (*Apis mellifica*). The colonies of these bees build a single huge comb on the face of rocks, on branches of big trees, and sometimes on walls of buildings, the comb measuring up to five feet across its face, and being always built in an open place. The bees are very good honey-gatherers, and from a single comb of the Rock Bee up to sixty pounds of honey is said to be obtained. But they are very ferocious and do not brook disturbance. Their sting is very painful, and several cases of human beings, and even big animals such as elephants, being stung to death by these bees, are on record. When enraged they pursue their victims for miles. A man cannot escape from them even when he dives in water, as they hover about the place and sting him when he pushes his head out for breath. These bees are known to migrate from place to place. Wild tribes collect their combs by burning away the bees usually at night, some making it a profession to collect their combs. The honey is squeezed out and the comb is melted into wax, each comb on account of its large size yielding a large quantity. The beeswax exported out of India and running up to the value of more than seven lakhs of rupees in a year is principally obtained from the combs of the Rock Bee. The Forest Department of India realises a large revenue annually by leasing the right to collect these combs from Forest Areas.

"(2) The second is the Indian Bee (*Apis indica*). They are smaller than those of the European Bees (*Apis mellifica*). The colonies of this bee always live in closed, covered places, *e.g.*, cavities in tree trunks or under the ground and in rocks, or sometimes in walls. The same habit sometimes leads them to build combs in unused boxes or packing-cases. At times they build inside rooms, in recesses in walls or windows which are kept shut. They always build several combs side by side and parallel to each other. According to the locality this bee shows a little variation. Thus the variety found in the Hills is slightly bigger and much darker than that found in the Plains. It is not as good a honey-gatherer as the Rock Bee or the European Bee. The maximum quantity of honey obtained from a single colony of this bee in the Plains is about seven pounds when the colony is very big, or little more in the Hills. An average quantity is about six pounds annually. The Plains variety is more irritable and more prone to stinging than the Hill variety. These bees are very prone to swarming, and are found to migrate as well to some extent. The Hill varieties, however, show a less propensity to do either. They cannot defend themselves against enemies so well as the Italian Bee and the Wax Moth plays havoc among them."

(To be continued.)

ONTARIO BEE-KEEPERS' ASSOCIATION.

DARK HONEY CROP REPORT.

The Crop Report Committee of the Ontario Bee-keepers' Association met on Thursday, September 9th, to consider the crop of dark honey. It was found that 105 members had reported 116,400 lbs. from 5,807 colonies; being an average of 20 lbs. to the colony. This is about double of last year's average. The committee advises members to ask 7½ cents. to 8½ cents. per lb. wholesale, depending on the size of package and the quantity sold in one order. No buckwheat honey should be retailed for less than 10 cents. per pound.

The local demand for white honey is exceedingly good, as many people are buying honey to put away instead of canned fruit, and the prices recommended by the committee are being realised.

Wholesalers are cautious about buying all lines of goods, including honey, and naturally have made an effort to buy as low as possible. A few large orders have been filled at a slightly lower figure than recommended, but these orders were for ton lots.

There is yet a large quantity of light honey unsold, but the market is firm, and a great many of the smaller bee-keepers report their crop all sold at prices recommended by the committee. All considered, the committee feels that honey need not be sold below prices recommended.

Signed by the Committee: WM. COUSE, H. G. SIBBALD, W. J. CRAIG, MORLEY PETTIT, Sec.-Treas.

The following circular letter, issued by the above B.K.A., shows that the fraternity of bee-keepers over the water are helping their gallant men who are taking a full share in fighting the Empire's battles. Possibly if our railway companies were approached they might follow the example of those in Canada:—

Sept. 10th, 1915.

DEAR SIR,—The bee-keepers of Ontario are rejoicing in a good crop of honey. Three hundred members of the Association reported over one and a half million pounds. While these are no doubt the most extensive of the ten thousand bee-keepers in the province, the total crop must be quite large.

While we are enjoying abundance in this and other crops I am sure that every bee-keeper will be glad to learn that arrangements have been made with the Canadian Red Cross Society, whereby we may share our honey with our Canadian boys of overseas contingents who are fighting our battles so bravely, or are lying wounded in hospitals.

This is a war in which every British subject is concerned. Those who cannot go and fight for the Empire can "do their bit" at home by helping those who go.

Contributions of honey are already coming in. There is no limit to the size or number of offerings which will be accepted and sent forward. The honey should be extracted and granulated in 60 lb., 10 lb., or 5 lb. tins, well sealed, and securely boxed. None but first quality clover honey should be sent. Unripe honey, particularly basswood, or any of the darker grades would be sure to arrive in poor condition.

Donations of honey should be sent by *freight* as soon as possible to the Canadian Red Cross Society, 77, King Street East, Toronto. The railroad companies have very generously offered to carry it free.—Yours very truly, MORLEY PETTIT.

A DORSET YARN.

After a quarter of a century in Dorset, on a fruit and flower farm, it is not any trouble to yarn on bees and the great good they do, beside the collection and the storage of honey. To-day, the 18th of September, when gathering violets, they are flitting from flower to flower, and even alighting on the bunch of flowers one holds in the hand; it is remarkable that this is so, as I have not noticed that they visit violets in the early spring when the fields are blue with them. I cannot say why, unless it is because there are so many pickers they are scared away. This month there is a wealth of ivy, but it is mostly wasps that are visiting it. This last week we have been driving bees for the farmers and cottagers to save them from brimstone and death. What a wealth of honey some of them had; what a variety of hives, boxes, and cheese tubs, as well as skeps! Bees do well in the sheltered valleys of Dorset. I know of one bee-keeper who only keeps three skeps through the winter. He had one swarm on the 28th April, three early in May, and three in July, and one in August. He sold two at 10s. each, two at 5s., one at 2s. In June from two of the early swarms I gave him a fine thick piece of honey from each side of brood. In a week each space was refilled with another fine piece of comb and honey. We drove the bees out of some of his skeps, which were very heavy, and he gave me some fine working bees of a brownish colour. Out of all that have been driven there was only one lot of Italians; these were not very strong. I turned them in with another lot of brown natives. They all settled down, and have been working without friction; to see the two varieties flying in and out of the one hive is curious to the bee-man. Mr. Nugent Harris (the Secretary of the Agricultural Organisation Society) was here on Tuesday. He was very interested in this hive, and said he had not seen anything like it before. These same Italians seem to be the foremost in robbing. Some of the driven swarms were placed on drawn out but empty combs, with large feeders filled with syrup above them; these were cleared out in a few hours.

A YARN OF OLDEN TIMES.

I heard last week from an old age pensioner that when they used to take the tithe in the neighbouring village of Lychett the rustic owner turned up the skep and told the tithe collectors to "take out every tenth bee." The yarn goes on that the collectors made hasty tracks for home, leaving near the hives of the rustic bee-keeper a large booty they had already collected, and they had not the courage to return for it.—J. J. KETTLE.

THE *DAILY MAIL* HOME GROWN WAR FOOD EXHIBITION.

No doubt most of our readers will have heard of the above, and know that honey was one of the foods the production of which the exhibition was designed to encourage. In this class there were nearly 1,000 entries. Mr. W. Herrod-Hempsall, Mr. J. Herrod-Hempsall, and Mr. G. R. Alder were asked to adjudicate on the numerous exhibits, the work occupying the greater part of two days. On the first day those exhibits that were obviously "out of the running" were eliminated, and on the second day the two first-named judges made the final awards. The honey was unpacked by soldiers who had been wounded and were convalescent, and many were the yarns told and scars shown at intervals in the work. A number of sections were unfortunately smashed in transit, but the jars had come through all right. Several well-known names will be noticed among the winners. In each section the first prize was £10, with five premiums of £1 each. The list of winners are as follows:—

Class L.

Section 1. Open. For best 1lb. jar of extracted honey from bees owned by exhibitor.

1. 11207, W. T. Cook, Binbrook, Lincoln.

Premiums.—11240, W. Patchett, Cabourne, near Caistor; 11224, L. Inwood, Odstone Marsh Farm, Shrivenham; 11189, Waters Appleton, Middleton-on-the-Wolds, Driffield; 11231, M. J. Lamboll, Chiddingfold; 11248, John M. Stewart, Mollance Gdns., Castle Douglas.

Section 2. For best 1lb. section of honey in comb from bees owned by exhibitor.

1. 11338, John C. Hall, California House, Howden.

Premiums.—11358, W. Patchett, Cabourne; 11314, Waters Appleton, Middleton-on-the-Wolds; 11368, John M. Stewart, Mollance Gdns., Castle Douglas; 11325, John Brown, bee-keeper, Lower Feltham; 11344, Arthur W. Hyde, Rich View, Kilkenny.

Section 3. Open only to those having fewer than ten hives; best 1lb. jar of extracted honey from bees owned by exhibitor.

1. 11725, J. Prior, North Lodge, Heldon, Stockbridge.

Premiums.—11584, W. Hallard, Stockton, Rugby; 11652, S. G. Leigh, Broughton, Hants; 11676, H. R. Millington, Wistanswick, Market Drayton, Salop; 11614, Miss C. Hooper, The Cottage, Upton, nr. Pembroke; 11491, Rev. A. N. Claxton, Parsonage, Penylan, Ruabon.

Section 4. Open to those having fewer than ten hives; best 1lb. section of honey in comb from bees owned by exhibitor.

1. 12233, Walter C. Smith, Lochfoot, Dumfries.

Premiums.—12142, John McDonald, Lochfoot; 12245, John M. Stewart, Mollance Gdns.; 12223, Mrs. G. Scott, Cottage, Brandesburton, Hull; 12180, Charles W. Patchett, Cabourne; 11973, Rev. A. N. Claxton, Parsonage, Penylan.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

THE OUTLOOK.

[9179] Wars and rumours of wars! not only with nations, but individuals and bees. Many well-known and enthusiastic bee-keepers are now serving their King and country, and many at home are willing to do all they can, but are not able to take up arms—myself amongst them. This leads me to the theme of this article. There are laggards not coming forward for King and country, and many taking the advantage of making capital at any cost. This also applies to bee-keeping, as it must be well known that there are—I may be forgiven for saying—two-thirds of the so-called bee-keepers in this country who do not possess the Guide Book, to say nothing of taking the *Journal* or *Record*. In the face of these facts, how are bee-keepers to combat "Isle of Wight" disease or Foul Brood? I know of many hives in this locality in which bees have died from both causes, left for any stray swarm to take possession of in the ensuing season. I have little time for entering into full detail on this; suffice to say I knew of some twenty such hives in this locality.

Last spring it was a most exceptional year for stray swarms. I have myself hived six; three of these I have now; one I gave a friend; two others I left where found after hiving them; these were all put or hived in hives where "Isle of Wight" disease had done its fatal work. Last year in my own case the hives had been well sulphured. *Re* your note to

letter 9177, page 346, 23rd inst., I contend that a hive can be thoroughly cleansed of any germ or spore, and the bees killed by sulphur with less trouble and more efficiency than by using the smoker. One pennyworth of sulphur rock or flower should be melted in an iron ladle, poured on brown paper, and placed in any tin or iron lid, and well lighted. Take off roof, closing the hive entrance and roof ventilation, turn back quilt, place burning sulphur on top of frames, replace the roof, and in less than one minute the bees are all quiet and the hive thoroughly disinfected. Without going further into this part of the question at present I may say I lost all my bees two years ago by "Isle of Wight" disease. I restarted last year, succeeding in keeping two Dutch stocks. I also purchased a driven lot of Dutch bees; these I united to a stock dying from "Isle of Wight" disease twelve months since, they gave three swarms. Part of the second was returned before taking to the heather, and gave me the best crop. The queen and three frames of this swarm I kept at home; it now covers three frames, and if anyone would like to try the same experiment, and our Editors will advise me where to send them, I shall be pleased to put same free on rail with two frames and laying queen, any remuneration our Editors can use or give to any charity or fund as they may think fit.—J. S. Fry.

WASPS *v.* BEES.

[9180] With reference to your correspondent's query (9176) in last week's issue, he clearly shows by his letter that he has the necessary knowledge to answer his own query, but he made the fatal mistake of *waiting* for the attack.

Whatever the merits or demerits of that policy in real warfare, we confidently leave in the hands of our war experts.

Bee experts know that that policy is fatal in the apiary. If the following three rules are kept bee-keepers should have little difficulty, excepting in cases where the bees are dwindling through other causes.

1st—Contract all entrances from one bee space to about an inch, according to the strength of the colony.

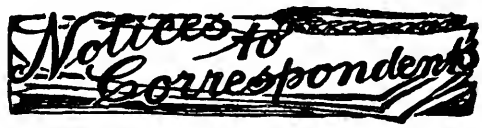
2nd—Attack the wasps in their strongholds in the evening armed with a narrow-necked bottle of cyanide of potassium, and pour about a dessert spoonful down the entrance. If the entrance hole turns sharply to the right or left, or goes straight up, it is safer to soak a bit of flannel or cotton wool and force in with a stick.

3rd—Study the answers to correspondents in the Bee Journal, and one will often find questions answered that one would like to ask oneself.—Wm. Thorne.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

[9034] Could you tell me in the *B.B.J.* what it is usual to pay for a "pitch" for hives at the heather. I have had eight stocks there from second week in August till now. What ought I to pay? Neither I nor the owner of the "pitch" have any idea, so decided to seek your advice.—H. W. H.

Reply.—The price may vary in different localities. It is, we believe, usually 1s. per hive. Perhaps some of our "heather going" readers will tell us what arrangements they make?



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith There is no fee for answering questions.

J. F. H.—You have not sent name and address. See head of correspondence column.

A. G. Wiggens (Wembley). *Faulty Queen.*—The queen is a young one, but is malformed, or has received an injury, and is quite useless.

C. D. (Chippenham).—(1) In the spring: (2) The husks. Your other queries will be answered next week.

J. F. Hague (Kirkham).—The bees are Natives. We see no trace of Carniolan in them.

W. Seale (Weybridge).—No doubt the unfavourable weather is the cause. It is late for feeding syrup, but the only thing you can do is to give them as much as they will take down during the next ten days. Make it thick, not more than ½ pint of water to each 1lb. of sugar, and give it warm, and keep the bees well wrapped up.

Honey Samples.

E. Taylor (Bootle).—No. 1 is clover, and a good sample. No. 2 from mixed sources, including fruit bloom, beans, dandelion, etc. The honey from these sources is generally dark in colour.

K. K. (Spilsby).—Your sample is clover of very good quality. Your other query will be answered next week.

C. H. (Somerset).—The honey is not too dark for heather, it is not pure heather, but is from mixed sources, including ragwort, which spoils the flavour and aroma. It is not worth more than 1s. per jar retail. Heather honey cannot be extracted, but has to be pressed out, the process, of course, spoiling the comb for honey storing purposes. The solar wax extractor is the best when it can be used.

F. Rider.—No. 1 is from fruit bloom, charlock, and mixed sources. No. 2 is mainly from fruit bloom. It contains a little honey dew.

Suspected Disease.

Anxious (Torrance).—It is "Isle of Wight" disease. The honey is quite wholesome for household use; it is only harmful to bees.

V. R. B. (Birmingham).—The bees are suffering from "Isle of Wight" disease.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column. 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

October 19th to 22nd, at Royal Agricultural Hall, Islington, London, N.—British Dairy Farmers' Association Annual Show. Classes for honey. Schedules and entry forms from the Sec., F. E. Hardcastle, 28, Russell-square, London, W.C. **Entries closed.**

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* "**Business**" *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

OVERSTOCKED; stock of bees on ten frames, young queen, plenty of stores, and guaranteed healthy, in almost new hive, 25s.—T. DOWNS, Hardwick Lodge, Wellingborough. v 25

HONEY extractor for sale, as new, 5s. 6d.—W. SOLE, 133, Sturton-street, Cambridge. v 14

EXCHANGE for honey in bulk or in bottles or sections, a new Invicta hand sewing machine, with cover, value 35s.; also an Edison-Bell electric phonograph and accumulator, runs 30 hours, and reproducer and aluminium horn, in working order, value £4 10s.; what offers? and sample of honey.—J. DRAPER, Bootmaker, Swanwick, near Southampton.

FOR SALE; "Cowan" extractor, 30s.; 1 cwt. ripener, 5s.; uncapping tray, 2s.; two Bingham knives, 1s. 3d. each; knife heater, 2s. 6d.; two Taylor's registered excluders, 9d. each; clearer board, 1s.; six shallow frame boxes, 1s. each; two Wilkes' aluminium rapid feeders, 2s. each; two bottle feeders, 10d. each; waxing outfit, 1s.; six tall show jars, 2s. the lot; all in very good condition.—STRATTON, Overton, Marlborough. v 16

EXCHANGE good stock of bees, on Standard frames, for 6 pullets, or year old hens.—TOMLINSON, Inveresk, Midlothian. v 15

WANTED; two sections per week, about two months; will a Cheriton member oblige C.O.D.?—L. KETTLE, R.E., Queen's Canadian Hospital, Beachborough Park

TWO good stocks of bees and hives for sale, 30s. each; also few small accessories.—MISS M. PILKINGTON, Cranford, Alan Drive, Hale, Cheshire.

FOR SALE; splendid light honey in 14 or 28lb. tins, 7d. per lb.—BURGESS, High-street, Newport Pagnell. v 18

BEES; wanted stocked skeps.—M. H. TILLEY, Bee Farm, Dorchester. v 19

FROM the Welsh Hills, healthy driven bees, in lots about 4lbs., with 1915 tested queens, price 6s. per lot, if possible send your own boxes; the number of lots limited; queens, 1915 tested, 3s. 3d. delivered, cash with order, if in queen cage 6d. extra. For teachers, &c., queens (not 1915) with drone and worker, for instructing pupils, 2s. 6d. the lot.—DAVID ROBERTS, Llanelidan, Ruthin, N. Wales. v 24

EXCHANGE for light English extracted honey, solid mahogany observatory hive, in perfect condition, valued at £2 10s., for three std. frames and three sections, all complete and healthy.—PERCY M. RALPH, Jessamine Apiary, Settle. v 13

EXCHANGE oil-paintings and water-colours, English gold frames, by myself and others, 30s. each, for honey, fruit, vegetables, or provisions.—COX, 116, Addison-road, King's Heath, Birmingham v 10

FIVE 28lb. tins honey (early crop), 14s. per tin; tins free.; f.o.r.; samples, 2d. each.—HENRY GOW, Waggon-road, Crossford, near Dunfermline. v 5

COWAN extractor, 3-frame, latest Meadows' type, with two motions and brake, takes three standard or six shallow frames, quite new, too large to go into honey house, having smaller, same kind, and sacrificing difference in price.—EMERY EVANS, Caecwn, Cray, Brecon. v 3

OVERSTOCKED; one pure Carniolan and two Banat-Black stocks, each on six frames, July, 1915, queens, quiet, strong, healthy, and prolific, £1 each; boxes returnable.—F. W. HARPER, Lyndhurst, St. James-road, Watford, Herts. v 6

FIRST grade clover sections, 9s. doz.; 6 doz., 8s. 9d.;; 1 gross, 8s. 6d.; 2 gross, 8s. 4d.; screwcaps, 9s. per doz.; packed on rail.—BARNES, Clogger, Wigton, Cumberland. v 98

HALF-TON honey for sale in 28lb. tins, 15s. 6d. each, tin included; also 120 screw-cap bottles, 9s. per dozen, first grade; cash or deposit.—OLIVER, Worthen, Shrewsbury. v 91

APIARY of 10 healthy stocks for sale, either as a whole or separately; can remain on present site if desired.—W. H. SIMS, Cole Bank-road, Hall Green, Birmingham. v 86

WANTED, for dissecting purposes, old worn-out or otherwise useless queens, alive.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, shaped skep floor boards, and stand for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office. 23, Bedford-street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat $f/125$ lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR DRIVEN BEES.—Rapid feeders, Canadian, to take 10lb. syrup, 2s. 6d. each; a gross dovetailed Standard frames, 10s.; two dozen bottle feeders, 1s. each; Porter bee escapes, 1s. 6d. each; slotted separators, 6d. dozen; drawn out shallow frames, 4s. 6d. dozen.—Box 10, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

"ISLE OF WIGHT"; I saved my bees, got a good surplus, have a strong Stock. Ten bee-keepers near have lost all, nearly 40 stocks gone in two seasons, none left in district save one stock imported: recipe and directions, 2s. 6d.—L. WALKER, Long-street, Wotton-under-Edge. v 17

HEALTHY driven bees, 5s. lot; young queens; package returnable.—CADMAN, Codsall Wood. v 20

HONEY in bulk for sale; sample and price from DRAKE, 3, Barrow-street, Bury St. Edmunds. v 21

THAT LEAKY ROOF not attended to! See advt. last week's "B.B.J."—HILLS, Alton. v 22

HEALTHY driven bees, 1s. 2d. lb. with 1915 queens; boxes 6d.; heather honey for sale.—F. HARRISON, Poultry Farm, Pickering. v 23

A GOOD INVESTMENT, healthy or diseased, your bees will benefit; proofs willingly given; my remedy is unequalled, 2s. 6d. post free; the season's last warning; keep this.—A. TROWSE, 51, Eade-road, Norwich. v 26

CLEAN, well filled sections wanted, light colour; state quantity and price carriage paid to THE HONIELADE CO., 23-25, Moorfields, London. v 28

ABOUT 1 cwt. inferior honey, in bulk, at 45s. to clear; sample 3d.—PULLEN, Ramsbury, Hungerford. v 36

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

TWENTY fertile Black non-swarming queens to clear, 5s. each; selected, and guaranteed prolific.—WILKES, Lichfield-road, Four Oaks.

STRONG healthy lots of driven bees, with young queens, 4s. per lot; boxes free.—EDWARD BAKER, Pickering, Yorks. v 7

CHOICE honey wanted, light in colour, in lots of not less than 2 cwts.; also sections.—Quote price to STANDARD HEALTH FOOD CO., Reading.

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d. post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 41

GREAT success in feeding for stimulating—for storing—and prevention of I.O.W.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex.

SECTION Glazing, best quality English made lace strips, 7d. per 100: lace bands, 3in., 1s. 3d., post free.—W. WOODLEY, Beedon, Newbury.

ITALIAN queens, young, fertile, return, 5s. each.—OLIVER KNIGHT, Epney, Stonehouse, Glos. v 67

1915 PULLETS for sale, all popular breeds, from noted strains for winter laying; birds on approval; free catalogue.—DOLLIS PARK POULTRY FARM, Church End, Finchley. v 29

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country; also if killed or wounded.

We print below a list of names already sent in. We shall be pleased to have other names as soon as possible.

Capt.-Adjutant Wm. Macdonald, Morinsh, Ballindalloch—6th Seaforth Highlanders—son of our well-known contributor, Mr. D. M. Macdonald. Two other sons are also serving, one in the Gordons and the other in the Black Watch.

2nd Lt. C. Eales, Tiverton—Devon Territorials (another son of Mr. C. L. M. Eales).

H. J. Brown, 13, Selhurst Road, Croydon, Kent—R.N.A.S.

T. S. Purt, 18, Gloucester Road, East Croydon—5th Royal Irish Lancers.

The last two, and G. R. Gatland (given as Galland in our last issue), are members of the Croydon B.K.A.

REVIEW.

Bee-keeping, by C. C. Ghosh, B.A., Assistant to the Imperial Entomologist. Bulletin No. 46. Agricultural Research Institute, Pusa.

(*Continued from page* 357.)

"(3) The third is what may appropriately be called the Little Bee (*Apis florea*). Its worker is much smaller than that of the Indian Bee. Compared with the worker, the queen and the drone are very big, but smaller than the queen and drone of the Indian Bee. The colonies of this bee build a single comb, which is usually not larger than the outstretched palm of the hand, but attains to a much larger size occasionally. The comb is usually built in bushes and hung on some branches. Frequently, however, the bees are found to build under eaves of huts and cornices of buildings and walls, in ventilator holes of houses and behind doors and windows. In the last named situations the comb is built parallel to the wall in such a way that it does not interfere with their opening and closing. The bees are not so prone to sting, and have therefore been styled "stingless" by several writers. Actually they do sting and cause swelling, though the injury is not so painful as that caused by the bigger bees. They gather very small quantities of honey, a single comb yielding only a few ounces.

"(4) The fourth is a small bee, smaller than the Little Bee. It is called the Dammar Bee (*Melipona* spp.). These bees are classed with the Honey Bees because they collect very small quantities of honey, which is supposed to have medicinal properties. But they do not secrete any wax to build their combs, which are constructed with gums and resinous substances collected from plants and allied to propolis of the true Honey Bees. The combs are built in hollow walls or tree trunks, and usually are extended beyond the opening of the hollow in the form of a funnel. The combs yield what is known as "Bees Dammar" or "Pwe-nyet" in Burma, which country has a small inland trade in this substance. The Bees Dammar may be used in varnish, and is used in Burma for caulking boats to make them waterproof. The right to collect the combs is leased out by the Forest Department every year, and yields an annual revenue of about Rs. 5,000."

We have then a description of the Italian Bee, but we do not agree with all that the writer says of it. Bee-keeping on modern lines has not advanced far in India, and the methods of obtaining honey are in many instances very primitive. The following gives

"THE PREVALENT CONDITION OF BEE-KEEPING IN INDIA.

"As already explained the Rock Bee and the Little Bee are not capable of being kept in hives. They live in a wild state, and the honey and wax from their combs are collected in the proper season. They will most probably remain as they are, and unaffected by any improvement and progress of bee-keeping in India. The Hill varieties of the Indian Bee being more amenable to control and less prone to swarming and migrating than the Plains varieties, from time immemoral they have been kept by the inhabitants of the Hills. The hive used is not, however, much of an improvement upon their natural abodes, *viz.*, cavities in tree-trunks and rocks. In the Khasi Hills and in some parts of the Eastern Himalayas the hive used is a

thick log of wood, measuring about a yard in length and about 1½ft. in thickness, which is hollowed out and the ends closed with planks, leaving a small opening at one end for the bees. These "log hives" are placed horizontally either on the ground or hung on to the eaves of huts. Practically all over the Himalayas up to an elevation of about 7,000 feet the hive used is an oblong niche or recess in the wall inside the house, having a small opening on the outside forming the entrance hole for bees, the recess itself being closed with a hinged plank, which can be opened or shut when necessary. Thus there is a closed chamber, and the bees build combs from its ceiling. The third type of hive used is either an ordinary earthen pitcher turned upside down, for instance in Coorg and Mahableshwar, or other forms of earthen vessels, hemispherical or cylindrical, as in some parts of Baluchistan. These earthen or pottery hives are either placed on the ground or on branches of trees. Sometimes old packing cases or tea-packing chests are taken possession of by the bees, which are then allowed to live in them.

"The methods, too, of keeping the bees are primitive. The bees build combs, fixing them permanently on the ceiling of the hive chamber. When they store honey they are usually smoked out or sometimes burnt, and the combs containing honey are cut out, the honey being afterwards squeezed out and the squeezed combs melted into wax.

"Bee-keeping is practised nowhere in the Plains, although bees occur plentifully in some places, building combs in cavities in trees and walls and in unused boxes. In many places, for instance, in the neighbourhood of Pusa, there are professional bee-men known as *Koeris* who, in the months of April and May, go about extracting honey from these wild combs. The owners of the boxes, houses and trees get half the quantity of the honey extracted. All the combs are cut out, the portions containing the brood are rejected, and those containing the honey are squeezed. This honey the *Koeris* hawk about, selling it at 5 to 8 lbs. per rupee. The honey contains many impurities in the shape of wax, pollen, and certainly also the juice of some eggs, grubs and pupæ. Therefore, it does not keep and ferments quickly, and is ultimately reduced to the condition of a thin and not infrequently sour syrup.

"Large quantities of honey are similarly obtained from the combs of the Rock Bee.

"Besides the professional hawkers there are dealers in Calcutta alone who sell about 60,000 to 70,000 lbs. of this thin fermented honey at about the same rate as mentioned above. There is no export trade, the whole of this quantity finding its way into villages, where it is stocked and sold by grocers. The honey produced in the Hills is of a better quality, and is obtained in a thick granulated condition. It is sold at 8 annas to 10 annas per pound. That produced in the Darjiling Jail is sold at the very high rate of a rupee a pound.

"There have been several attempts by private gentlemen and missionaries at keeping the Indian Bee in the modern European method. But they have either not been successful or have not given better results than the prevalent indigenous methods, principally, it appears, for want of proper appliances. Without these appliances bees cannot be properly controlled."

The writer then gives a description of modern methods and appliances. One difficulty in India is the difference in size between the Native bee and the Italian, necessitating different sized cells in the comb foundation, and perforations in the queen excluders for each variety, and also different spacing for the combs.

As our readers will see, the book is very interesting, especially to those who like to know how bee-keeping is carried on in other lands, and may be obtained from agents for the sale of books published by the Superintendent, Government Printing, India, Calcutta. Among others in London, Constable & Co., 10, Orange Street, Leicester Square, W.C., and T. Fisher Unwin, 1, Adelphi Terrace, W.C. The price is 1s. 4d., and postage 3d.

A Peculiar Malady (p. 143).—A possible explanation of this trouble may be found in the propolis, which may have a peculiar influence upon Mr. Garvey. May I suggest that he should use gloves when handling the bees or the sections, to ascertain whether this is the case?

Prevention of Swarming (p. 156).—I hardly know whether Mr. Smallwood is serious in his hasty condemnation of elbow room as a restraining influence. Taking him seriously, however, it is evident that he quite mis-states the caution. This does not advocate unqualified room, but room at the right time and in the right place. If room be properly given, swarming will be reduced to a minimum. I seldom get swarms, two only this swarming year from over thirty

stocks, and these two had not received full attention owing to pressure of other duties. It is all very well to talk of the difficulty of restraining the swarming fever after the temperature has begun to rise, but what is needed is prevention not cure, quite a different matter. In the case given by Mr. Smallwood, the swarming was most probably a result of his interference. He actually removed the whole of the super room, and crowded the bees down upon the brood nest, expecting them to be satisfied with the far less congenial room provided below. What under the moon of honey did he expect them to do? Evidently to alter all their plans at his bidding, which appears to be that they should abandon their brood nest. Well, they did! What more did he want? No, the action of the bees was not a "vagary," as he suggests, but the most normal procedure under the circumstances. Matters might perhaps have been different had he given a set of drawn combs below, but, as it was, he has at least learned one method of producing a swarm when not wanted.

The Yellow Peril (p. 198).—It is very pleasant to find oneself, for once, in entire agreement with another writer upon our pet subject, and if Mr. Herbert Mace is as glad of my poor approval as I am to read his wholehearted advocacy of our native bee, there are two gratified beemen in the country to-day. One point raised by him deserves special notice, and that is the comparative ability of the beemaster who praises a foreign race. This is often overlooked. Most of the writers who so warmly recommend the Italian bee are able to give special attention to their stock, and their followers often possess an easily aroused enthusiasm for new things, whether bees or bee appliances. Possibly the followers are able to maintain the race in something like purity, but, if not, they must be singularly enthusiastic to be unobservant of the unpleasant results of crossing. Others who voice their praises may purchase their stock regularly from a breeder who pays attention to improvement, but the highest note of praise comes, I fancy, from those who have Italian bees to sell. My experience has been that most of the serious trials given to these bees, particularly under our northern give-and-take conditions of climate and honey flow, have ended in a reversion to our native bee. This experience fully bears out Mr. Mace's criticism, and any colony of my own which shows a yellow band as a result of mis-mating is ruthlessly requeened. These yellow thieves are a perfect nuisance in an apiary where nuclei are kept and handled frequently. Out with them!

Spreading Brood (p. 225).—The real truth about this is that neither those who advocate nor those who condemn are entirely wrong. It is inadvisable for the novice to spread brood whenever he will, and it can be done to advantage under certain conditions. The expert—or, shall we say, the beemaster of experience—spreads brood to advantage, because he does so with judgment, the hive conditions telling him whether his plans may be carried to success in the manipulation. He is not acting simply upon some half-understood dictum of a text book, but with full knowledge of his requirements as related to outside conditions and internal characteristics, including the readiness of his own bees to accept such interference.

July Swarms (p. 225).—I do not quite understand what "D.M.M." means by "young" swarms. If this new term means "second" swarms or casts, the operation detailed is seldom likely to be successful. A six-frame swarm with a virgin queen, hived on starters, would not be ready for comb spreading in five days or so, and the operation would in any case result in unequal combs, and probably an excess of drone cells. Even if the "young swarm," whatever that means, has a fertile queen, it is not easy to see what "D.M.M." means by loss from chill, because in the period named, the combs could not possibly be filled with brood to the limit of the capacity of the swarm, so that the comb-building temperature is not the safeguard he suggests. No safeguard is needed. There is, however, a possibility that extra demands upon the energy of the bees will result in undue wastage of old bee life, and that a danger period will occur in the relation of bees to broodnest. I have seen this occur naturally, where a swarm hived in a skep has accumulated heavy stores, but has dwindled to the limits of safety. As for carrying out a "similar plan," and taking brood from driven bees, I have never seen a case where advantage would result. The fault here would appear to lie with the rate of feeding. Personally I should prefer to add to their store of sealed combs.

Enthusiasm (p. 225).—I must frankly admit an error in the reading of "D.M.M.'s" paragraph on p. 109. I read it too hastily, and took the latter portion to be comment upon Dr. Miller's note. My compliment to "D.M.M." was, however intended seriously, but as it is evidently undeserved I am obliged to withdraw it, with a fitting apology for the misunderstanding, which was not a "straining after effect," but due to sheer carelessness. May I hope that "D.M.M." will accept this and allow me to deal with any other misunderstanding in the same way.

A DORSET YARN.

"Come and look at my bees!" was said by a neighbour last week. "We have had no honey this season, and now the wasps are crowding in, helping themselves to the small store the bees had gathered." I reduced the entrances to a minimum, and two stocks that were weakest I stopped up entirely at night, keeping the bees prisoners. I told him to look for the wasp nests at night, drop in a small lump of carbide moistened a little, and stop up; the wasps are unable to live through that. His stocks did not seem at all strong, yet they were surrounded by fields which through the season were white with clover (cows do not seem to care for white Dutch, like they do the hop clover), and there is always plenty in flower for the bees. In another cottager's garden the skeps were made of straw, and were big and deep; the bees were splendid workers, always had that feverish haste the bee-man likes to see, close to a deep railway cutting, with the heavy express engines going by day by day. The cottager's wife was proud to tell me she managed them herself; her man "couldn't abear 'em; he was afraid of 'em," she said. Yet I had seen that man in an election squabble clear a space for a speaker in a hostile parish and level his opponents one after another to the ground, yet he was truly afraid of bees. But I am getting from my subject. She hived her swarms herself, and sometimes had to get a ladder, which she was not afraid to mount; she had never known disease; for years she always kept three of the heaviest of the season's swarms to stand the winter, and had dosed the others with brimstone. This year I drove them out for her; what a weight of honey was in most of them! The deep skeps held such a lot of comb.

One cannot help thinking in these times of bee disease: Is it this old system that makes the skeps kept by the cottagers mostly immune from disease? The new comb made, the old destroyed. I know it is not always so, because a niece of mine went to the village of Iwerne (in Dorset) three weeks since, and said, "The bees were crawling on the ground in crowds" in her mother's garden; she was in a great way about it. I was busy at the time, or I would have gone down to see them. One cottager told me the reason his bees did so well was the great oaks that grew near him. I could not disagree with him, because I did not know; the tops of these trees were too near heaven for me to observe them.

At South Lychett Manor, the beautiful country home of the late Sir Thomas Lees (killed in the Dardanelles with the Dorset Yeomanry; my own son was with him, but lived through that struggle for Hill 70), many big trees of limes are round the extensive grounds. The bees there have mostly done their best when these trees are in flower. This year the rains came at that time and spoilt the honey harvest. The owner of these bees is the able gardener, George Dance, at present serving with the 7th Hants in India. He enlisted when the war began in August, 1914, and went to India in the trooping season of the same year; a man of the right sort, gave up a fine position and 30s. per week for 1s. a day. It must have been a stiff change for him, who had never been a soldier before. He asked me did he have to take an oath as to his age (he was past the age limit). I told him "No, put your age at 35, not over"; even now his talent as a landscape gardener is sought after; he is laying out (with the aid of 100 natives) an estate in the hill stations of India. Men like him we are proud to know and call friend.—J. J. KETTLE.

BEE-KEEPING IN IOWA.

THIRD ANNUAL REPORT OF THE STATE BEE INSPECTOR TO THE GOVERNOR OF THE STATE OF IOWA FOR THE YEAR 1914.

By Frank C. Pellett, *State Bee Inspector.*

A copy of this report has been sent by Mr. Pellett. It is not only a report of the work done, but also tells the condition of bee-keeping in Iowa, and gives much useful advice.

It is profusely illustrated with cuts, and the report and list of members of the Iowa B.K.A., as well as several most interesting articles, are also embodied in it. Although we in this country are apt to consider that bee-keeping in America is on a totally different footing to what it is here, it may be noticed in reading this report that bees are often kept in America in very similar conditions to what we sometimes see here, and careful, energetic, and up-to-date bee-keepers have pretty much the same difficulties to contend with as in our own country; nor does the proportion of ignorant or careless bee-keepers to those who are the opposite appear to be less than it is here, and I for one do not altogether agree with Mr. C. P. Dadant when, in the course of an article further on in the book on a "Short History of Bee-Keeping," he says that in Europe, "with the exception of Switzerland, which is very far advanced in progress, the older countries are following somewhat in the rear of the newer States, Canada, Australia, New Zealand, the United States, etc." The only point where we in Great Britain are "in the rear" is in the matter of bee legislation. A perusal

of Mr. Pellett's report brings one to the conclusion that in Iowa—and there is no reason to think that state is "in the rear" of the others—the majority of the bee-keepers are in no way ahead of our own, and in some points they are behind. To use Mr. Pellett's own words, "One is impressed with the fact that the standard of Iowa's professional bee men is a high one. . . . On the other hand the standard of the mass of bee-keepers is deplorably low." I would commend that last sentence to Mr. Dadant's consideration when he is again comparing bee-keeping in other countries with that in his own. As Mrs. Malaprop would say, "Comparisons is odorous."

Writing of the prevalence of foul brood, Mr. Pellett says there are indications that within a short period it will have spread into every county of Iowa, and that the bee-keeper of the future must be prepared to deal intelligently with disease or quit the business. This condition of things has to a great extent been brought about by those bee-keepers who are careless, or ignorant, or both. There is something to be said for the statement that, "Bee diseases are not an unmixed evil, for they compel better attention. . . . Some of the most successful honey producers of the writer's acquaintance say that they have never made any money from their bees until they were compelled to fight foul brood." The following statement will give exactly the experience of those who have toured this country visiting bee-keepers. "On the average farm the bees are the last thing to receive any attention. Too many men are content to leave the bees to shift for themselves as best they may, and if there is a surplus of honey in the fall they regard it as so much velvet."

Bee-keepers in Iowa have one advantage over us. They have state inspectors, and power to compel their instructions to be carried out. The difficulty there appears to be that the inspectors have too much ground to cover to enable them to carry out the work as efficiently as could be wished, and a suggestion is made that where disease is badly scattered in any county, to authorise the appointment of a competent resident bee-keeper as a county inspector on petition of about ten resident bee-keepers and the recommendation of the state inspector. Some of our bee-keepers are—or were—terribly afraid of compulsory inspection of bees. The Iowa bee-keepers do not appear to share the views of some of the owners of apiaries in this country. The Iowa Bee-Keeper's Association is lending every possible aid to the inspector in his work. At Sioux City the bee-keepers offered their services freely in acting as guides and assistants, and also furnished transportation by placing their teams and automobiles at the service of the inspector without charge. No, those energetic bee-keepers do not appear to be at all nervous about the inspector spreading disease; on the contrary, after three years' experience of the work, the report states: "With efficient county inspectors in counties where disease is badly spread, and the state department to look after localities where there is not so much to be done, and to have a general supervision of the work, there is hope that foul brood can be reduced to a point where it will no longer be a menace to the bee-keeping interests of Iowa." Another difficulty is that funds are not available to carry out the law, as it now stands. What would our bee-keepers say to the following suggestions for raising funds to carry out the work of inspection and disseminating information on bee-keeping? "There is no apparent reason why the man with less than ten colonies of bees should be exempted from taxation. . . . I would suggest that this section of the tax law be repealed, and that all bees be taxed the same as other property, and that part of the funds thus raised be appropriated for special work in the development of apiculture at the state experiment station." Several reasons are given why many bee-keepers do not secure more surplus, and some of them are quite applicable to our bee-keepers, viz., allowing the bees to become overcrowded and swarm, and rearing too many drones. We believe the latter fault is not now so common in this country as it was a few years ago. Most of our bee-keepers have found the advantage and true economy of using full sheets of worker base comb foundation in the brood frames. Mr. Pellett says: "Someone has estimated that it requires the labour of five worker bees to support one drone. I do not know whether this estimate is correct, but if it is it will readily be seen that the presence of 20 per cent. drones in the total population of the hive will absorb all the surplus honey that would otherwise be stored." My own opinion is that the estimate of five workers is too high, but if each drone only absorbs the labour of two workers, where there are some thousands of them in a hive, they must make a very appreciable difference to the amount of surplus honey that is stored, as well as loafing about taking up room, and causing the hive to be overcrowded and overheated, and thus probably causing the bees to swarm.

There are one or two points in Mr. C. P. Dadant's interesting "History of Bee-Keeping," and some of the other articles, upon which I may have something to say in a future article.—J. HERROD-HEMPSALL.

WITH THE BEES AT THE FRONT

By Sergt. A. G. Atwell.

(*Continued from page* 345.)

I also saw a long row of straw-covered skeps in the same village later. But unfortunately I had no time for further investigation, as we were kept rather busy with our preparations to meet the Germans, and could I have met the owners of the bees I am afraid I should have found great difficulty in making myself understood, as my knowledge of the French language was not at its best just then.

I may mention that it was on the night of the 19th August that the first post arrived from home, and there were very few of us who did not get a letter. Leaving Leschelle on the morning of the 20th we marched the greater part of the day, reaching a little village called Malgarni, but our stay here was very short, for we were off again early next morning, and were now well on our way to meet the Germans, who, of course, as everyone knows, were rapidly invading French and Belgian territory. After another long march in very hot weather we arrived at the village of St. Aubin; another short rest and we were off again early next morning; we had no time to lose then. Often as we plodded along the dusty roads we could see the tops of a row of rustic skeps sticking above the hedges, and a village would never be passed without I could see one or more of these old-fashioned little apiaries clustered under the hedge or standing under the shelter of the overhanging thatched roof of one of these quaint old white-washed cottages. I must not forget to mention the thousands of refugees we were continually passing on the road. These were of all ages, from babies in arms to old men and women of some 80 or 90 years of age, some plodding along carrying a few of their belongings as best they could, others more fortunate were driving along with all the furniture and accoutrements that it was possible for them to pack on their much overloaded wagons; these vehicles ranged from the little cart drawn by a dog to huge wagons to which were harnessed a team of four or six oxen. Everything that had wheels seemed to be in evidence. On many occasions I have seen these old wagons (many of which had not been used for years) break down with their great loads, and the people have had to leave them where they lay, for there was no time to lose. The booming of the bursting German shells could be heard in the distance, and the black clouds of smoke which could just be seen rising over the horizon meant that another village was being sacrificed to the flames, striking terror to the hearts of the refugees, and spurring the soldiers on to meet this inhuman foe. I think the sight of these miles of fleeing people was one of the saddest that it has ever been, or ever will be, my lot to witness, and I feel it quite beyond me to adequately describe the scene on paper. One little thing more, however. The people were driving almost every living thing from their farms before them—cows, sheep, and pigs; chickens and ducks packed in baskets and slung under the wagons; all were there. But the bees? They could not very well bring the bees! And so these little apiaries with their healthy workers and their year's stores still intact were left to the mercy of the invaders. Well I remember about this time passing a house, the owners of which were just preparing to leave. Their bundles were ready on the doorstep, and they were only waiting for the master of the house, who was in the garden having a last look at his bees. He had some six to eight large frame-hives there, which, by the way, were supered and must have contained a considerable amount of honey. This was the biggest apiary of frame-hives that I had yet seen, and by their appearance the old man must have given a lot of time to them. I should like to have spoken to him, but as we were only marching by I had not the time, but I often wondered afterwards if he ever left his bees.

(*To be continued.*)

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

DESTROYING WASP NESTS.

[9181] With reference to the question of destroying wasps which has lately been discussed in the *Journal*, my bees have this year been much worried by them, and I have destroyed seven nests in a space of less than 50 yards. I found, however,

the application of potassium cyanide in the entrance to the nest insufficient, unless the nests were subsequently taken out and destroyed; and on three occasions, when digging out the nests, although a large number of dead wasps were found by the entrance where the poison was, there were still wasps in the nest sufficient in number to be troublesome. They may have developed from the larvæ subsequently, or the wasps escaped the effect of the poison in some way. It is not possible to get the poison contiguous to the nest when there is a curved or fairly long tunnel leading to it.

When the nest could not be reached from the entrance I judged its probable position and dug down upon it as quickly as possible, and opened it out as much as I could, then put in the poison and covered it over—all but a small space to allow any wasps on the wing to enter—with a piece of slate to keep in the emanations from the cyanide, for it is this which kills. When the nest took any time to open out, and the wasps began stinging, I put the slate over the nest and left it for a time; and if this operation were performed in the evening I found they soon settled in and could again be approached, the poison put in, and the hole covered as described. I found applying the poison directly to the nest itself the more satisfactory way, and it allowed the nest to be cleared out two or three days after without any trouble.

There is one point about potassium cyanide that it is well to remember: it readily decomposes and is then useless, and becomes so more quickly if exposed much to light. It should be kept well stoppered and in a dark place.—C. B. Hunter Lyol.

A SUGGESTION.

[9182] Would you care to accept a suggestion from one who has been for some years a subscriber to the *B.B.J.* and is anxious for its prosperity? It occurs to me that the *Journal* would be much more helpful, especially to novices, if announcements could be inserted *regularly*, say once a month, relating to the conditions in the various counties as they affect bee-keeping. I feel sure that among your correspondents there must be experts in most counties who would be willing to send a brief notice as to local conditions. —G. Pursall.

[We should be very pleased to publish such information if we could get it, but we receive very few reports of this kind. If any of our readers will undertake to send short interesting reports regularly for our "Echoes from the Hives" column for the *Journal*, or the *Record*, it will give us great pleasure to insert them.—Eds.]

AN INTERESTING MATING EXPERIENCE.

[9183] I had a virgin Italian queen three weeks old with a strong stock. On a warm day last week I opened the hive and noticed a number of drones on the frames. I picked off about ten or twelve, which I flung into the air. I then found the queen and tossed her up off the palm of my hand into the air: In twelve minutes she returned, having met a drone.—J. C. Garvey.

THE SMALL HONEY BEE.

WRITTEN BY THE AMATEUR BEE-KEEPER ON ALCOMBE COMMON.

(1)

I love to listen and hear the bees sing,
With feet on the floor board they spread out their wings,
And then should the time of swarming be near,
The queen will be piping with note loud and clear.

(2)

Like a mother, the queen to her children will say,
"We are so overcrowded, come let us away!
The sun it is shining so warm and so clear,
We will now take our flight high up in the air."

(3)

The old dame from the cottage the hum will soon bring,
And with door key and pan she will make the air ring,
The bees help the chorus by buzzing around,
Until for a nest some place can be found.

(4)

The queen then alights on the branch of some tree,
A cluster of children soon round her will be,
The dame with the pan and door key in hand,
Will now haste away to prepare a new stand.

(5)

And then she will go and get a new skep,
And some herbs from the garden in syrup will dip
With which the skep's rubbed as though it would shine,
While the clustering bees still wait all the time.

(6)

At last all is ready, the old dame begins,
She first takes the skep and shakes the bees in.
And when she is certain of getting the queen
The others will follow and all soon be in.

(7)

In the cottage the dame will then go and sit
With needles and worsted some stockings to knit,
The kettle is boiling, the tart near at hand,
After tea John will put the skep on the stand.

(8)

The bees then will cluster round mother all night,
But are quite wide awake soon as it is light,
The work of comb building at once they begin,
So that eggs may be laid by the mother—the queen.

(9)

In the fields, lanes, and gardens the workers are found,
Gath'ring nectar, and pollen from flowers all round,
Their home they supply, and place some in store,
For when flowers are gone they can gather no more.

(10)

What a lesson to learn from the small honey bee,
There is wisdom and prudence for all men to see,
The drones that have helped not to gather the store,
Are expelled in the autumn, and then seen no more.

(11)

What a diff'rence to England 'twould very soon make,
If all drones were expelled—what a time it would take!
No fear then that we overcrowded would be,
But abundance of room for all we should see.

(12)

So here is a lesson—to all it is free.
We may learn every day from the small honey bee.
To be wise in our dealings, and thrifty and true,
And never be drones—if we have work to do.

ROBERT HOLE.

WEATHER REPORT.

WESTBOURNE, SURREY,

SEPTEMBER, 1915.

Rainfall, 2.52in.	Minimum on grass, 28, on 30th.
Above average, .30in.	Frosty nights, 0.
Heaviest fall, .85. on 24th.	Mean maximum, 63.9.
Rain fell on 9 days.	Mean minimum, 48.5.
Sunshine, 193.4 hrs.	Mean temperature, 56.2.
Above average, 16.7 hrs.	Above average, 0.3.
Brightest days, 5th and 10th, 11.2 hrs.	Maximum barometer, 30.380, on 6th.
Sunless days, 0.	Minimum barometer, 29.423, on 26th.
Maximum temperature, 72, on 13th.	
Minimum temperature, 36, on 30th.	

L. B. BIRKETT.

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

SUGAR *v.* HONEY.

[9035] Could you tell me the date when sugar displaced honey as a sweetening agent? The percentage of nutrition in (*a*) cane sugar, (*b*) beet sugar, (*c*) honey. This latter was given in *B.B.J.*, or somewhere, as 80, and I want the others for comparisons.—C. D. CHIPPENHAM.

REPLY.—One of the earliest references to sugar in Great Britain was that of 100,000lbs. of sugar being shipped to London in 1319, by Tomasso Loredano, merchant, of Venice, in exchange for wool. Sugar was then sold for 1s. 9½d. per lb., and throughout Europe it constituted a costly luxury, and was used only medicinally, until the increasing use of tea and coffee in the 18th century brought it into the list of principal food staples. The increase in the consumption is shown

by the fact that in 1700 the amount used in Great Britain was 10,000 tons, in 1800 it had risen to 150,000 tons, and it was during this time that it became a substitute for honey.

The percentage nutrition value of all substances mentioned by Dr. König appeared on page 334 of *B.B.J.*, Sept. 16th last. What you ask for is not stated, but both cane and beet sugars would be less nutritious than honey, as the latter is already inverted, and therefore more easily assimilated, besides containing valuable mineral matters which are absent in cane or beet sugars.

HONEY AND KIDNEY TROUBLE.

[9036] Will you kindly say in "Queries and Replies" if honey is any special benefit to persons suffering from Bright's disease? I think I have seen it stated that honey has remarkable medicinal properties in cases of kidney troubles, but cannot verify it.—F. H. B.

REPLY.—In "Honey and Health" it is stated that in kidney and bladder complaints the benefit of the use of honey is soon noticed, especially when taken in the form of Honey Tea. We do not recollect seeing it especially recommended for Bright's disease.

MAKING NUCLEUS HIVE.

[9037] I saw an account some time ago of a bee-keeper who always had a nucleus colony standing a little in front of each of his stocks. Then in the autumn he killed the old queen in the stock, and united the nucleus to the stock. I remember it said that he made the nucleus hives himself, and they only cost about 6d. each. I wonder if I could make some inexpensive ones this winter, and would you be so good as to give dimensions and instructions in the "B.B.K.?"—K. K.

REPLY.—There is no need to make anything elaborate for this purpose. A plain box 17 inches long and 9 inches deep and 4½ inches wide to take three brood combs. Fix two pieces of wood each 8½ inches deep at equal distances from each end inside the box, so that the space between them is 14½ inches. The top edge will be ½ inch below edge of box. An entrance cut at one end, a bottom, and a roof made to slope from front to back complete the box. Let the bottom project in front to form an alighting-board. Plinths should be nailed on the bottom of the box at back and each side, and on the roof, to cover the joints and prevent either box or roof slipping. If the wood is planed and the box painted, a neat and lasting job may be made. Any box of suitable size may be used if made of ½- or ¾-inch wood, and carefully taken to pieces.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

* Will some bee-keeper possessing a copy of "The Guide," or of any work on Apiculture in French, present or sell same to Mr. A. V. Campbell, The Croft, Harpenden, Herts, on behalf of a Belgian gentleman at present living in England owing to wounds?

"SCOTTIE" (Balloch).—*Dead Queen.*—The queen is a young one reared this season, and is a native.

MISS E. M. KENTISH (Dorset).—As both lots appear too small to winter successfully, the only thing to do is to unite them and risk the disease, and keep on using the remedies.

Honey Samples.

ROBERTS (Bala).—No. 1 is clover honey, of good quality. It is quite suitable for the show bench, but should not be staged in its present condition, as it is beginning to granulate. It should either be warmed to make it quite clear, or allowed to become completely granulated. There was no "fault," unless it was cloudy from incipient granulation. Probably your opinion and that of the judge did not agree. No. 2 is a heather blend; this is also of good quality, and worth showing in a class for that honey.

RADNORIAN (Radnor).—No. 1, clover, charlock, and mixed sources, including a little ragwort. No. 2, clover. No. 3, very mixed sources, including a little charlock, ivy, blackberry, heather and honey dew.

WEALD (Kent).—No. 1, red clover and mixed sources. No. 2, clover. No. 3, heather blend. Nos. 1 and 2, 1s. per lb.; No. 3, 1s. 2d. per lb.

Suspected Disease.

F. C. (Wisbech).—The trouble was robbing. We do not find disease in the bees sent. The large bee is a queen, not a young one. They are natives. Fumigate the combs and they may be used again. Can you give us the full name and address for our Roll of Honour?

DOUBTFUL (Sheffield).—It is "Isle of Wight" disease.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

BEES; wanted stocked skeps.—M. H. TILLEY, Bee Farm, Dorchester. v 19

EXCHANGE for light English extracted honey, solid mahogany observatory hive, in perfect condition, valued at £2 10s., for three std. frames and three sections, all complete and healthy.—PERCY M. RALPH, Jessamine Apiary, Settle. v 13

EXCHANGE oil-paintings and water-colours, English gold frames, by myself and others, 30s. each, for honey, fruit, vegetables, or provisions.—COX, 116, Addison-road, King's Heath, Birmingham. v 10

WANTED, for dissecting purposes, old worn-out or otherwise useless queens, alive.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, shaped skep floor boards, and stand for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR DRIVEN BEES.—Rapid feeders, Canadian, to take 10lb. syrup, 2s. 6d. each; a gross dovetailed Standard frames, 10s.; two dozen bottle feeders, 1s. each; Porter bee escapes, 1s. 6d. each; slotted separators, 6d. dozen.—Box 10, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

TWO 1915 fertile queens, 4s. each.—DAVID HUNTER, Abington, Lanarkshire. v 30

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

"ISLE OF WIGHT"; I saved my bees, got a good surplus, have a strong Stock. Ten bee-keepers near have lost all, nearly 40 stocks gone in two seasons, none left in district save one stock imported: recipe and directions, 2s. 6d.—L. WALKER, Long-street, Wotton-under-Edge. v 17

HEALTHY driven bees, 1s. 2d. lb. with 1915 queens; boxes 6d.; heather honey for sale.—F. HARRISON, Poultry Farm, Pickering. v 23

CLEAN, well filled sections wanted, light colour; state quantity and price carriage paid to THE HONIELADE CO., 23-25, Moorfields, London. v 28

"ISLE OF WIGHT" disease permanently cured without loss of bees; solution, 1s. 6d. post free.—PRESSEY, Carshalton-hill, Coulsdon, Surrey. v 41

GREAT success in feeding for stimulating—for storing—and prevention of I.O.W.—Particulars, S. SIMMINS, Queenland, Heathfield, Sussex.

SECTION Glazing, best quality English made lace strips, 7d. per 100; lace bands, 3in., 1s. 3d., post free.—W. WOODLEY, Beedon, Newbury.

ITALIAN queens, young, fertile, return, 5s. each.—OLIVER KNIGHT, Epney, Stonehouse, Glos. v 67

1915 PULLETS for sale, all popular breeds, from noted strains for winter laying; birds on approval; free catalogue.—DOLLIS PARK POULTRY FARM, Church End, Finchley v 29

ONE gross of 1lb. screw cap jar honey for sale.—W. B. ALLISTER, Throckenholt, Wisbech. v 31

HONEY, fine flavour, in hygienic pots, 8s. 3d. dozen; sample lb., 10d.; granulated honey, light and medium, 60s. and 58s. cwt.; sample, 2d. —ANDREWS, Rock-road, Peterboro'. v 27

FROM the Welsh Hills, healthy driven bees, in lots about 4lbs., with 1915 tested queens, price 6s. per lot, if possible send your own boxes; the number of lots limited; queens, 1915 tested, 3s. 3d. delivered, cash with order, if in queen cage 6d. extra. For teachers, &c., queens (not 1915) with drone and worker, for instructing pupils, 2s. 6d. the lot.—DAVID ROBERTS, Llanelidan, Ruthin, N. Wales. v 24

DAIRY SHOW, Agricultural Hall, Islington, London, N.

Patron: H.M. THE KING.

Octobor 19, 20, 21, 22 (Tuesday till Friday).

Great Exhibition of Cattle, Goats, Poultry, Pigeons, Dairy Produce, New and Improved Inventions, Butter-makers' and Milkers' Contests, Cheese-making and Poultry-Trussing Demonstrations.

Band of H.M. IRISH GUARDS in the Main Hall.

Admission.—Tuesday, 9 a.m. till 6 p.m., 2s. 6d.; 6 p.m. till 9 p.m., 1s. Wednesday, Thursday, and Friday, from 10 a.m. till 9 p.m., 1s. The Gilbey Hall, Poultry and Pigeon Department, will not be open till 1 p.m. on the first day. No admission after 8 p.m. on the last day of the Show.

SIZE OF THE JOURNAL.

In order to conserve our supply of paper we shall be compelled to again reduce the size of the JOURNAL every other week, commencing next week.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country; also if killed or wounded.

We print below a further list of names to those sent in. We shall be pleased to have other names as soon as possible.

Capt. Clayton, Tavistock Road, Wisbech—Cambs. Batt. Suffolk Regiment. Wounded.

2nd Lieut. P. C. Garnett, Brookside, Penketh, Warrington—2/4th West Lancs. R.F.A.

HIVE ROOFS.

When hives begin to age any weak points in the roof soon make themselves manifest, and the bee-keeper must put right what is wrong, as if not disaster may follow during the ensuing winter.

Roofs should be made from specially selected boards showing no shake, knots or weakness. They had better be painted at least every second year, if not yearly. When they develop cracks they should be covered with felt or zinc, the latter being by far the nicer to look at and more pleasant to handle, while it is most effective. Care in either case must be taken in tacking on the covering firmly, otherwise strong winds and frequent handling will tend to weaken its hold and mar its efficiency. Perhaps the best and most available material to use for repairing hive roofs is unbleached calico. First give the top a good coat of paint and then lay on the calico smoothly and neatly, without any creases, and let it overlap at the ends and sides. Then give another coat of paint when dry, and after some time yet another. If this painting is renewed every second year the roof should continue waterproof as long as the hive proper holds out as an efficient home of the bees. Many other kinds of cloth will do as well as the calico; the great point is to make the whole watertight with plenty of paint.

SHADE BOARDS.

Many bee-keepers whose hives are in exposed situations lose quite a number of bees during winter by death from misadventure owing to an insistent desire on their part to come out in bright sunshine and have a flight, when otherwise the weather is unfavourable. With snow on the ground they fail to return to their hives owing to finding a snowy grave. Bright blinks of sunshine tempt them out even with zero weather. Shade boards should be in front of every hive a good part of the spring to hinder this, and they should be of sufficient size to shade the whole hive front, and especially the entrance and flight-board. A medium-sized box lid serves the purpose admirably. Even thus, in high lying districts, when bees have been confined for a considerable time owing to stormy weather, they will insist on issuing under unfavourable circumstances in spite of all hindrances we may use. If the snow is crusted by frost they get up again, as a rule, all right following a short rest, but if the snow is soft and powdery the heat of their bodies melts it very quickly, and they sink the deeper the more they struggle. At times the surroundings of the hives show quite a large number of holes or pits, each forming the grave of a bee. Some winters the loss from this cause is very considerable, and every means should be taken to avoid it.

EXCLUDING MICE.

During some winters these become veritable pests, and if left unchecked may do a large amount of mischief. If proper precautions are taken, however, they should not be able to find entrance to any well-constructed frame hive. If the summer passages were left open during the winter months they would be a nice temptation to such vermin to enter and nest in the warm wrappings above the frame tops. When contracting the doorway to a winter entrance of three or four inches, tack on a piece of perforated zinc in which is cut an entrance measuring about one inch by $\frac{3}{8}$ inch. This effectually excludes all these would-be intruders. If these are carelessly fixed the ingenious little creatures are able to tilt one side up, or even to bend round one end sufficiently far to gain admittance. While a

strong stock is likely to meet them with a warm reception, a weaker one tolerates their presence. They never do well after if a good part of the winter is spent by the mice overhead. The disagreeable smell is very unpleasant to the colony, and, in addition, they frequently do a great deal of damage to the combs. Exclude them effectively. An old writer gives as a cure for the plague, "Traps, cats, and henbane." All these should be tried where mice are numerous.

AUTUMN FEEDING.

Paradoxical as it may sound, the best time for spring feeding is autumn—just before winter packing takes place. Sugar-syrup fed at this time should be thick in order that the bees may be able to store it much in the condition in which it is fed. It is certain that at this season a thick syrup is much preferable to a thin for winter food. Slow feeding at that period exhausts the bees and tells on their vitality, because all the time it is going on the workers are unduly excited in sipping and storing it. The feeding should therefore be done by a rapid process, and it is best to use a large Canadian feeder, by means of which the whole quantity can be given in one or two doses. Supply the syrup so hot that you can barely allow the finger to remain in it. The heat is an attraction for the bees, and once they are made aware the food is within reach they work industriously until it is consigned to the cells. A strong stock may carry down from 10lbs. to 20lbs. in the twenty-four hours. Then the bees can at once proceed to re-arrange their stores as it suits them best, and seal all over to prepare for winter. A large number of open cells are a fertile source of dysentry and other bowel troubles, owing to the fermentation which sets in, because the honey turns rancid and sour, and is therefore unhealthy food.

A DORSET YARN.

A wet Sunday, rain in fine drizzle all day till 4 p.m., the post brought an order from a Covent Garden salesman, "Must have violets for Monday sales." That meant picking in the rain (the women do not come on Sundays to gather the flowers), and not till 4 p.m. did we hear the hum of the bees. Since the war, with my three sons gone, we have had to work 16 and 18 hours a day in the busy seasons.

There are two stocks of little brown bees that have never been seen quiet all the time I have had them. These two I bought from a cottager (who has always kept bees); one I bought in the first week in May. I had made a new home for them, and gave them ten frames of wired foundation. Before May was out they had one rack of sections on. I kept a square of glass on the top with bee space on the top of the sections. The brood-chamber was in a hive made of Tate sugar boxes. At night time, when they were home, the sides of the hive and the outside of brood-chamber were always covered with bees. The glass was covered with a piece of unbleached calico, it did not matter what hour of the night or at daybreak in the morning one lifted the cover, this lot always had the feverish haste which the bee-man likes to see. They soon began to build a few cells between the sections and the glass. There was only room for two cells, but they spread them over one or two sections. At night these cells were partly filled with honey, but were always empty in the morning, which showed that the bees were never still. I gave another rack underneath the first; I then had to add another lift, also made out of a sugar box (these sugar boxes are nearly all the same size and not much trouble to fit). Finally, I gave them a third rack. Several times they looked like swarming; there were so many of them the hum at night was very distinct at some distance from the hive. They gave me three racks of 21 sections, 15 in each rack were finished beautifully, those from the outsides we used ourselves. July was a failure when the showers came. After that these same bees had the same feverish haste, and to-day at 5 p.m. they and the other lot from the same source are flying out and high up away to something sweet. But why these two lots, and the others only keeping a guard at their entrance? This lot is not robbing (unless they are robbing a neighbour's hives), they fly so high. There are no flowers, unless it is a row or two of perpetual strawberries and a row 300 yards long of autumn raspberries, which are still flowering; on the violets they do not seem to do much; only the big single ones attract them. The gorse has plenty of blossom, and ivies are covered with insects, but mostly wasps.—J. J. KETTLE.

KOOTENAY BEE-KEEPERS' ASSOCIATION, B.C.

ANNUAL MEETING.

The first Annual Meeting of the Kootenay Bee-keepers' Association was held at the City Hall, Nelson, on Friday, 24th September, 1915, the last day of the Nelson Fruit Fair, at which there was a

representative attendance of members from Nelson and the surrounding districts.

The report is as follows:—

"The Association, organised in September, 1914, is the first Bee-keepers' Association to be formed in British Columbia. Seventy-eight members have been enrolled. Unfortunately, the past season has not been a good one for honey production in this section of the Province. Exceptionally fine and warm weather prevailed during March and April, when the bees went ahead and promised well; but the following three months, May, June and July, were excessively wet and cold, consequently the clover on which we mainly depend for our surplus honey crop yielded but very little nectar. The honey that has been taken is much darker in colour than usual. In many instances colonies were actually starving in June, and would have succumbed had they not been fed with sugar syrup. The Honey Label adopted by the Association for the use of the members to promote uniformity in putting up honey for sale has met with general approval, and 3,825 have been sold to date."

The balance-sheet, showing an excess of assets over liabilities of $43.35, was approved and passed.

The following officers were elected for the year ending 30th September, 1916:—Hon. President: W. E. Scott, Deputy Minister of Agriculture, Victoria. President: Major-General Lord Aylmer, Queen's Bay. Vice-Presidents: G. E. Parham, Superintendent, Dominion Experimental Farm, Invermere; G. Fleming, Nelson. Executive Committee: J. J. Campbell, Willow Point; Mrs. Casler, Nelson; J. Hyslop, Nelson; C. G. Johnson, Nelson; W. H. Rixen, Nelson; W. J. Mohr, Nelson; J. Blinco, Creston; B. Lockwood, Fruitvale; E. Alpaugh, Kaslo; R. E. Plewman, Rossland; J. H. Vestrup, Nakusp; H. W. Collins, Grand Forks; H. G. Slater, Westley; T. S. Gill, Cranbrook; G. F. Attree, Queen's Bay; James Johnstone, Nelson; W. Romain, Nelson; A. E. Watts, Wattsburg. Hon. Secretary-Treasurer, W. J. Sheppard, Nelson. Hon. Auditor, T. M. Rixen, Nelson.

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

Secretaries:—

MR. J. M. BATES, Heathurst, Pelham Road, Bexley Heath.

MR. G. W. JUDGE, Barrowdene, Shepherd's Lane, Dartford.

WINTER PROGRAMME.

November 22nd, 1915 (full moon): Girls' School, Crayford, 8 p.m.

February 7th, 1916: Annual Meeting, Girls' School, Crayford, 8 p.m.

March 20th, 1916: At Sidcup.

Prize Essays (to be read Nov. 22nd, 1915).

At a Council Meeting held at Crayford on the 23rd September last the question of the winter session was carefully discussed. In order to encourage members to assist in the work of the Association, it was decided to invite essays or short papers (limited to about 2,000 words), and to offer prizes for the best papers submitted.

The competitions will be divided into two classes as under:—

(A) For those members who possess a B.B.K.A. certificate of proficiency.

(B) All other members (exclusive of A).

Mr. V. E. Shaw has kindly given two 1916 queens as prizes, to be delivered next season at any time to suit winner's convenience; one of which will be awarded as a first prize in each class. The question of further prizes will depend upon the number of essays sent in.

The papers should be in the hands of the secretaries not later than November 12th, when they will be submitted to an independent expert for selection. His decision will be final.

The winning and other selected papers will be read and discussed at the next meeting (November 22nd). The choice of subjects is left to individual selection to enable beginners to compete with more experienced members.

The long evenings have now arrived, and the Council believe that many of our members could assist by preparing and submitting papers in the manner outlined above. Those able and willing to do so are urged to communicate with the secretaries as soon as possible. Lady members are especially invited to contribute papers; their methods and experiences would naturally be of very great interest.

The Council are introducing this competition in the belief that members will support the movement. This being so it will not only tend to create interest in the craft, but will provide means whereby a greater interchange of ideas can be obtained than has been possible in the past.

Please book up November 22nd as it may not be possible, owing to increased cost of postage, to send further notice.

All correspondence relative to "Essays" should be addressed to Mr. J. M. Bates.

JOHN M. BATES,
GEORGE W. JUDGE,
Hon. Secs.

October 8th, 1915.

TAKING BEES TO THE HEATHER.

I enclose prints of photos taken on our trip to the heather, Mr. Wallace, Mr. Harrison, and self and son. This annual event is very enjoyable. We are up about 3.30 a.m. in the morning, and after a drive to the moors, about 14 miles away, our hives are in position: we breakfast there at 7.30, and are home again for lunch. Our next trip is usually when the heather is in full bloom to see how things are going, and we bring them back end of September.

Our method of travelling to the heather, after many years' experience, is as perfect as is possible, and we never have mishaps by bees escaping or smothering. The entrances of hives are reversible, and can be closed or opened in a second; no tacks or hammering. We allow from 6 to 9 inches on top for bees to fly in, with a sheet of perforated zinc over all, and travel with the roof off. Our sections or shallow frames are ready drawn out, and only require filling. The bees, of course, must be strong and headed by young queens, and successful results seldom fail unless the weather is bad all the time, which I only remember once happening—to our cost.

TAKING BEES TO THE HEATHER.

HIVES AT THE HEATHER.

I think it does the bees a deal of good, as I am sure that the natural store of heather honey is better for them to winter on than artificial feeding, which it dispenses with.

My friend, Mr. Wallace, the eldest of the party, is in his element when on this trip, as he was born and bred among the Scotch hills of bees and heather, and what he does not know of taking bees on the moors is not worth knowing.

I hope to make my boy an expert some day: he is already interested, and is delighted to assist in extracting and bottling (and I may add *tasting*), and being only 7 years of age he does very well. I intend to set him up with a hive very soon.—W. BRADBURN.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9184] I think it was in March when I wrote to you last, having had a very bad attack of the "Isle of Wight" disease the previous autumn. It broke out in one of my three hives at home twelve months ago. I tried several things, and as the winter came on they seemed to pull round, but when a few sharp frosts came in April I found the hive affected had died. As the days got warmer bees from the other two began crawling about, and as both stocks were weak I united them and put them in a clean hive with nearly all new frames and foundation. I put in some naphthaline balls and continually syringed the landing board with Izal. Then I tried a new queen, and in a few weeks the crawling stopped, and the stock got quite strong.

When I was on my holidays at Ashford, in the Peak, I came across two bee-keepers, one with five stocks and the other with three, both had got the "Isle of Wight" disease very badly, thousands of bees were dead, and still more crawling. I found out the owners and had a chat with them about their bees. One man said he could not sleep at night for the thought of it. He had been a bee-keeper twenty-five years, and he had a splendid lot of hives, which he had made himself.

He sent away for a *stock cure*, and on the Saturday afternoon I helped him to take all his honey and dress the hives with the stuff. I left the place on the following Monday, so I do not know how he is going on.

The other man, who was not very interested in the care of the bees, had, we found out later, bought some hives from a man who had lost his bees through the "Isle of Wight" disease. I wish I could have got near him for five minutes, for there is no doubt that is how the disease got to Ashford. In less than a week after I got home hundreds of bees were, after all my efforts, crawling in front of my hive. This time I found what I think is a *good* cure. I got some *flowers of sulphur* and put it in a piece of brown paper, then I put it in the hive and lit it, and that was the end of my three hives. I then used a very strong disinfectant for the hive and dug the garden over with lime. Do you think it would be safe to start again in the early spring?

[You might try again next year.—EDS.]

I have other hives in the garden of the house where I work, which I think are all right, and at the end of July I had two swarms in three days, and in nine days after they sent out a cast each, making four lots in eleven days. This was my first experience with swarming, but I got them into the hive all right. I think I can give some of our queen-rearers a tip. A friend of mine asked me to give him a virgin queen, so I set to work to cage one or two queen cells. At the same time I cut out two cells to take home to show another friend. That was about four o'clock. They were lying on a window-sill till six o'clock, when I took them home. Later on in the evening, just for an experiment, I put them under a cage on the oven shelf, which was not very hot, and in a few minutes I heard a buzzing, and there was a lovely queen which had come out of the cell. I put a piece of honey in comb under the cage and shut the oven door. In the morning I took her to work with me and kept her warm till 7.30 p.m., when I took her to my friend, who lives about a mile away, and last week he wrote to say she was mated and was laying well.

I have seen in the *B.B.J.* many people have got honey-dew. I had two hives very strong by the end of May, and in June they gathered about 80lbs. of honey, but what I got in July was very dark. Feeding has been an expensive job this year, but we must pack up and hope for better things next year.—G. WARD.

A SUGGESTION.

[9185] The suggestion (9182, page 369) is of course good, and has been made by other readers in the past, and I have noticed for a time has produced certain contributions. To me, however, it appears it would interest your readers quite as much if when recording their notes, &c., besides giving name or initials, the name of the town or village was added. This is, of course, for you to add, and I only wondered if there was anything in your editorial mind against it.—V. E. Shaw.

[We have no objection whatever to publishing the name of town or village—in fact the notes suggested would fail in their object if this was omitted—and in our "Echoes from the Hives" column the name is given.—Eds.]

A SOLDIER'S NOTES.

[9186] The above letter in *B.B.J.*, p. 344, Sept. 23rd, is most interesting to me, as the photograph reproduced is of one of my stocks suffering with the disease, and taken just before destroying that evening. The marks on the hive will be noticed very distinctly, while the clustering of the bees may be of some interest or guide to bee-keepers (who have never seen the disease) in diagnosing the symptoms.

The photograph was taken before Pte. Bull came to this district, and he was most interested in it.

We were pleased to meet him in this district as a fellow bee-keeper, and a thorough good fellow he was in lending a helping hand with the bees as occasion arose.

I trust other bee-keepers pushed for time may have had the good fortune to have had a soldier help them this summer.—Yours truly, H. P. Young.

SULPHUR AND "ISLE OF WIGHT" DISEASE.

[9187] With reference to J. S. Fry's correspondence of Sept. 30th in *B.B.J.* (9179), I thoroughly believe that sulphur will disinfect and kill any germs it can reach. I have used it for some time, and always, as a precaution against any disease, fumigate any combs and hives I have before putting fresh bees in them, also everything I have used with the bees. I have several Dutch stocks, and I quite believe they are the only bees that will stand against "Isle of Wight" disease. A friend of mine lost all his bees, which were blacks, so he bought another swarm, which soon after caught the disease, so I told him to make away with the queen at once, which he did, and I gave him a young fertile Dutch queen, which he successfully introduced. That stock is now very strong, with plenty of winter stores. Another very old bee-keeper came to ask my advice about his bees—the only stock he had left—and said they were dying out fast with "Isle of Wight" disease, and had lost their queen in the bargain. I gave him also a fertile Dutch queen, and when last I saw him he had quite a different face, and told me the bees were not dying now, but were getting very strong in number and working well. I think anyone having diseased hives about in which bees have died that are not shut up close should be severely dealt with, as I know there are a lot like that left standing, hoping a stray swarm will come into them. What is the good if they do come? They soon go the same way as the last lot. I think it is very good of J. S. Fry, whoever he is, to offer to give two frames of bees and queen to any brother bee-keeper who has lost his bees. There will be plenty after them, and I trust they will be able to make a fresh start. Wishing you and your excellent paper, the *B.B.J.*, every success. —H. Cheesmur.

THOSE YELLOW THIEVES.

A Reply to Mr. Crawshaw.

[9188] Yes; "out vith 'em" when the honey flow has ended, or manipulations are carried out and honey removed in broad daylight; but "In vith 'em" I say when you want to find a queen quickly, or when you require powerful colonies with bees sufficient to fill three to five supers.

For solid frames of brood with larvæ next to the top and side bars let's plump for yellow queens.

No bees, pure or hybrid, are, in my experience, easier, quicker, or more pleasurable to handle from April till July, and fierce robbing may with these be almost entirely avoided if the precautions I hope to explain are followed.

Freedom from wax-moth and disease, tremendous energy, and prolific queens give the yellow varieties a charm that blacks can never have.

In speaking of Italians one should be careful to mention the kind they are—whether pure, or first and second crosses, or whether the workers are the result of a chance mating between a black queen and Italian drone. Because of neglect to do this we often find one bee-keeper praising them for the qualities another one condemns.

It is asserted that Italians or Goldens have a habit of distributing themselves to other hives.

This is true, and is, of course, most noticeable where these and black colonies are kept in the same apiary. On the other hand, native bees when young spread equally much among themselves, but are never seen in nuclei or stocks of lighter varieties, which defend their entrances much more vigorously than Blacks.

Another point in favour of Italians is their keenness to take syrup when feeding is resorted to.

Populous three and four frame nuclei will take down and seal a pint of syrup night after night until their combs are solid with stores. They are easier aroused to activity than natives, and this can be maintained as long as feeding be continued. As regards temper, I find that it is hottest in the English and Italian cross, fluctuating much among black colonies; but always very mild in pure Italians or their hybrids. A slight smoking will always subdue them quickly and effectively. I have noticed this particularly when handling nuclei that formerly consisted of blacks, but to which Italian queens of various grades had been inserted some three months previously.

The bees that sting one's knuckles vigorously are certainly not the new queen's progeny, but the last of the black bees still remaining.

And now just a word about robbing. Directly the flow wanes, or in early August, we go round and contract the entrance of every hive.

Three inches we allow for strong colonies, one and a half for weaker ones, late casts and the like, populous nuclei one inch, and weaker lots half inch to a bee way.

As much work as possible is done at sundown each day, when bees are not so easily excited.

But when work is pressing and has to be carried out in the daytime, or honey is removed, serious robbing can be avoided by spraying over each hive from the back a medium solution of carbolic acid, Izal, or Sanitas in water. From the moistened hive and grass just round the odour will rise quite strong enough to keep away prowlers who may follow the smoker.

Syrup is poured into the feeders at dusk only, and care is taken that the quilts fit snugly, and that the hives are bee tight everywhere except at the small entrance.

A splash or two of creosote on the top quilt will keep away wax-moth and wasps.

In conclusion, my attitude is this. I do not entirely condemn black bees because they are often poor disease resisters. While having disadvantages they also possess qualities of the utmost value in building up a strain capable of making the most of our English summer.

On the other hand, outside of the robbing tendency, Italians are as fine a race for all-round purposes as can be had.

There is perhaps no limit to what can be accomplished in the honey-producing line by the best of these, backed by experience and good management, while their undoubted freedom from diseases adds much to the pleasure of keeping bees.

Give them a fair chance to prove this for you.—THE RAMBLER.

APICURE AND "ISLE OF WIGHT" DISEASE.

[9189] Without going into the matter as to "Isle of Wight" disease being curable or not, I am simply stating a case as it happened under my own supervision. In June, 1914, a swarm escaped from the garden of a friend and took up its quarters in a neighbouring garden, going into a hive in which all the bees had died from "Isle of Wight" disease. The owner of the hive refused to allow the bees to be taken, and not wishing to cause unpleasantness the matter dropped.

A fortnight later the new owner called me in and I found the ground covered with crawling bees, the combs also badly fouled. I suggested destruction, but could not get consent, so thought to destroy them by misadventure. Having heard that an overdose of Apicure was fatal, I quietly dropped eight or nine pieces on the floor-board and awaited results. Well, I think those bees had to hold their noses, for they seemed reluctant to go in. At any rate, the crawling stopped, and for a time all work also. They destroyed the queen and raised another, and, I may add, did not seal any brood for the rest of the season. About the second week in July they seemed to have recovered completely, but at the end of the month the disease appeared again. Five pieces of Apicure were then put in, the symptoms again stopped, and the bees wintered safely. Since then Apicure has been kept constantly in the hive, the bees have just been packed down, and at present show no sign of disease. A strong swarm from this hive has up to now shown no sign of it either. I have found in no less than four cases that strong doses of Apicure at least checked the disease, and up to now all the bees are going strong.

Might I suggest that others try this remedy, and report results. At least it can do no harm, as my experience with all other remedies has been that a diseased stock is a doomed one.—G. J. FLASHMAN.

"ISLE OF WIGHT" DISEASE IN DURHAM.

[1190] I enclose a cutting from the *Newcastle Chronicle* for Oct. 1st wherein you will find the progress of "Isle of Wight" disease in Durham county during the last year. I understand Mr. Price only gathered his information during his tour this summer, and by inquiries from bee-keepers as to the number of stocks they had lost from the disease.

Now, Mr. Editor, what is the reason "Isle of Wight" disease has been so prevalent in Durham county? Perhaps a lot of carelessness, or, again, ignorance; but the real reason, I think, is selfishness. Just an example of what I mean by selfishness: The bees in an apiary about a mile from where I live were the first to contract the disease, and instead of destroying the bees and combs the owner left his hives open for every bee in the district to wander in and out of them at will—result, district totally cleaned out of bees the next year. Yet while that bee-keeper kept preaching to others to destroy and burn everything connected with the diseased hives, he himself kept his frames of comb, which had been cleaned out, and put swarms on them, and these, I am sorry to say, are dying with "Isle of Wight" disease at present.

I have travelled a lot of country and never came across bee-keepers as independent as some in Durham county. If you try to explain anything to them they look at you and probably think "What does he know; he cannot have kept bees very long," especially if the man is older than oneself, and perhaps has kept bees in skeps. I could give several instances of apiaries where I have called and found an old bee-keeper who thought no one knew anything about bees but himself, and would not be convinced otherwise. If some bee-keepers would only practise what they preach, would legislation be needed, as I am sure legislation is needed very much about here? I wonder if the Durham Bee-keepers' Association is now defunct. Two years ago it was moribund, so I think it must have died naturally. —a great pity, seeing that the Durham Education Committee appointed Mr. Price to tour the county, a plan which I hope may be continued next and following years.—H. HARMER, Gateshead.

The cutting our correspondent refers to is as follows:—

BEE DISEASE IN DURHAM.
MORE PREVALENT THAN IN ANY OTHER DISTRICT.

A serious state of the bee industry in the county of Durham was reported upon at Durham on Wednesday by Mr. Price, expert to the Durham County Education Committee.

He stated that he had visited apiaries and had found the "Isle of Wight" disease was very prevalent in every district. Out of 617 stocks of bees already examined 63 had disease, and 10 were suffering from foul brood.

"Isle of Wight" disease, he explained, was now spreading very rapidly in the northern part of the county and the Wear Valley district, and 364 lots of bees had succumbed to the disease before his visit.

The number of stocks of bees lost in Durham county was far greater than in any other district he had been acquainted with.

Bee Shows to Come.

A nominal charge of 2s. 6d. is made for notices (not exceeding 7 lines) in this column, 10 lines charged 3s. 6d., up to 15 lines 5s., which covers cost of insertion from order till date of show. Cash should accompany orders for insertion.

October 19th to 22nd, at Royal Agricultural Hall, Islington, London, N.—British Dairy Farmers' Association Annual Show. Classes for honey. Schedules and entry forms from the Sec., F. E. Hardcastle, 28, Russell-square, London, W.C. **Entries closed.**

Queries reaching this office not later than FIRST POST on MONDAY MORNING will, if possible, be answered in the "Journal" the following Thursday. Those arriving later will be held over until the following week. Only SPECIALLY URGENT queries will be replied to by post if a STAMPED addressed envelope is enclosed. All queries must be accompanied by the name and address of the sender, not necessarily for publication, but as a guarantee of good faith. Correspondents are requested to write on one side of the paper only.

WINTERING A SKEP.

[9038] Would you kindly tell me in your BRITISH BEE JOURNAL: (1) How I can ascertain if the bees in skeps have sufficient supplies for winter? (2) *Removing a fixed frame and comb.*—What is the best way of taking out a bar frame from a hive when the top of frame breaks away, and a sure way of subduing

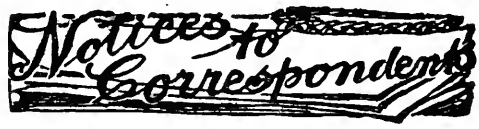
the bees while taking out the frame?—"BEGINNER."

REPLY.—(1) You can only judge by the weight, and this will depend on the size of the skep. The gross weight should be from 40 to 50 lbs. (2) You will probably have to lift out two or three frames next to the one that is fixed. Take a knife with a long thin blade and push this down between the end bars of the frame and the hive side, as this is most likely where the frame is fixed. If you cannot then move it with the fingers, lift the body box and place small blocks of wood, one or one and a half inches thick, on the floor board and under each end of the frame. If the box is then pressed down the blocks will force the frame up. You may use either smoke or a carbolic cloth to subdue the bees, or use both. Give a few puffs of smoke in the entrance first and have a couple of carbolic cloths so that one may be used on either side of the comb to be removed.

THE PRODUCTION AND CONSTITUENTS OF HONEY.

[9039] Will you kindly answer the following:—(1) The amount of honey produced in British Isles; (2) the amount which could be produced; (3) Honey is stated to contain 80 per cent. nutriment. How is this made up, *i.e.*, proteids, fats, carbohydrates, salts, water? (4) actual waste is stated to be $\frac{1}{20}$th. Does the $19\frac{1}{2}$ per cent. difference consist of water; (5) the workers' sting is said to be original ovipositor adapted to a new function. But queens have, as I understand, both a sting and ovipositor. If I am correct I should conclude that workers originally possessed both organs. Or else, does queen use ovipositor as sting: this, I do not think, can be the case. Kindly explain very briefly.—C. D. CHIPPENHAM.

REPLY.—(1) No statistics are published respecting the production of honey in Great Britain by our Board of Agriculture, but you could obtain those for Ireland from the Department of Agriculture and Technical Instruction, 4, Upper Merrion Street, Dublin. In 1895 the B.B.K.A. appointed a committee to report on the bee-keeping industry and foul brood in the United Kingdom. From data collected through the County Associations it was estimated that the yield of honey and wax in England and Wales was 40,000 cwt., and it was stated that there were parishes where not less than one ton of honey was obtained by skilful bee-keepers. (2) In the above report it was also stated that with the number of bee-keepers, provided they were well instructed, the output could be raised to 60,000 cwt. in England and Wales. (3 and 4) According to Dr. Konig 0.19—1.24 per cent. albumen and 80 per cent. carbohydrates. The average analysis of honey as given by C. A. Brown, Bulletin 110, Bureau of Chemistry, U.S. Dept. of Agric., Washington, is the following: Moisture 17.70, levulose 40.50, dextrose 34.02, sucrose 1.90, ash 0.18, dextrin 1.51, undetermined 4.19 per cent. König gives the following average (138 samples): Water 20.60, nitrogenous matter .76, levulose 38.65, dextrose 34.48, sucrose 1.76, gums, &c., .22, pollen and wax .71, other non-sugars 2.82, ash .25, phosphoric acid .028 per cent. (5) If you will refer to "The Honey Bee," by T. W. Cowan, page 81, you will see that Dewitz, Vogel and others have pointed out that the sting is not only analogous to an ovipositor, but is actually used for this purpose by the queen bee.



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith There is no fee for answering questions.

JONES (P'heli). *Disinfecting Combs.*—They may be disinfected by fumigating with formaldehyde. See answer to C. F. M. in BRITISH BEE JOURNAL for August 26th. The *safest* plan is to melt the comb down and burn the frames.

L. T. S. K. (Kent).—You do not say whether there are any stores in the combs. There should be 30 lbs. or more in each hive, and if this is the case there is no need to give candy. The probability is that what you have given has been carried down and stored in the combs. If they are short of stores put on a four or five pound cake of candy when packing up for winter. It is not advisable to disturb the bees every week. We would answer your last query if at all possible. They will be more economical, war or no war, as the weather becomes colder.

F. COE (Wisbech).—Your idea is good and it will be made use of if possible, but your sketch will need re-drawing.

"X" (Lanarks).—The hives will be all right, it will be safer to wash the whole interior with a solution of Izal.

Honey Samples.

C. T. B. (Devon).—It is heather honey; quality very good.

Suspected Disease.

L. B. (Uxbridge), ENQUIRER (Sheffield), C. HARMA (Salisbury).—It is "Isle of Wight" disease.

K. F. S. (St. Andrews).—The bees have died from "Isle of Wight" disease. The probability is the stock became weakened by disease and was then robbed out.

W. B. (Barnet).—It is a bad case of Foul Brood. Thanks for your appreciation.

D. PRICE (Tal-y-Cafn).—The bees are affected with "Isle of Wight" disease. The small piece of comb contained Foul Brood, the larvæ in the large piece were healthy.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

FIVE stocks of bees for sale, 10s. each.—MRS. OWEN, Risby, Bury-St.-Edmunds. v 34

WANTED, good lantern slides on poultry-keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

WANTED, a third class honey at 3d. per lb.—M. G., "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 32

BEES; wanted stocked skeps.—M. H. TILLEY, Bee Farm, Dorchester. v 19

BEESWAX wanted by dentist.—Kindly send particulars of quantity and price to HUMBY, 88, Newgate-street, London, E.C. v 40

WANTED; first quality run honey, bulk, genuine samples.—GRIMSHAW, Queen's Buildings, Rawtenstall. v 39

BEES on sale, strong and healthy, with or without hives.—ROBINSON, 23, Towngate, Leyland, Preston, Lancashire. v 38

A FEW good lots of driven bees (English Blacks) for sale, 4s. each, box free and perfectly healthy.—R. METCALFE, Ebberston, Snainton, Yorks. v 37

7 14lb. tins honey, very good, 7d. lb., gone candied.—CUTFORTH, Hairdresser, Oakham, Rutland. v 36

FOR SALE, shaped skep floor boards, and stand for same, 1s. 6d. the set. The above are better than new as they are painted, and are being sold at half price, cash with order.—BOSS, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, for dissecting purposes, old worn-out or otherwise useless queens, alive.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR DRIVEN BEES.—Rapid feeders, Canadian, to take 10lb. syrup, 2s. 6d. each; a gross dovetailed Standard frames, 10s.; two dozen bottle feeders, 1s. each; Porter bee escapes, 1s. 6d. each; slotted separators, 6d. dozen.—Box 10, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

COLONIAL honey, 50s. to 60s. cwt., carriage paid; cash.—ROWE, 6, King's-road, Cardiff. v 33

WANTED, quantity honey.—Send sample and quote price per cwt. to SPICER, 60, Elspeth-road, Clapham Common. v 35

"ISLE OF WIGHT"; I saved my bees, got a good surplus, have a strong Stock. Ten bee-keepers near have lost all, nearly 40 stocks gone in two seasons, none left in district save one stock imported: recipe and directions, 2s. 6d.—L. WALKER, Long-street, Wotton-under-Edge. v 17

CLEAN, well filled sections wanted, light colour; state quantity and price carriage paid to THE HONIELADE CO., 23-25, Moorfields, London. v 28

FEW good healthy stocks, frame hives, 25s.; driven bees, 1s. 6d. lb., box 6d.; young heather queens, 2s. 6d.—HOOD, White Heather Apiary, Pickering. v 41

SIZE OF THE JOURNAL.

As we briefly announced last week, the JOURNAL will be abridged every other week, commencing with this issue, until further notice. We are reluctant to take this step, but owing to the continuance of the war it is almost daily becoming more difficult to obtain paper. It is not a question of cost—although the extra cost of paper and increased expenditure in other directions are no small matter—but of being able to obtain paper at all. Neither is it a case of "panic," but a situation that has been gradually developing since the commencement of the war. We shall again revert to the full size every week directly we can be certain that the supply of suitable paper will not fail. In the meantime we feel sure our readers will continue to extend to us the unfailing help and consideration accorded us in the past, and which is greatly appreciated.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country; also if killed or wounded.

We print below a further list of names to those sent in. We shall be pleased to have other names as soon as possible.

Gen. Sir Stanley Edwardes, K.C.B., who has for many years been a member of the Council of the B.B.K.A., and is a most careful and painstaking bee-keeper, has three sons and two grandsons serving in the Army as follows:

Col. Malcolm Edwardes, D.S.O., Governor and Commanding the forces at Bushire, in the Persian Gulf.

Major J. Graham Edwardes, 1/3rd Goorkhas, home from the trenches wounded.

Major Alec Edwardes, on the staff at the base of operations in Mesopotamia; he is at Busra.

Capt. Hugh Vidal, A.S.C., in charge of the supply of all the troops in Kent.

Lieut. Frank Stevens, 9th Lancers, Hodson's Horse, at home sick from blood-poisoning, A.D.C. to General commanding the Lucknow Cavalry Brigade in Flanders, where he returns as soon as well.

Sergts. John Edwards and Charles Emerson, High Street, St. Botolphs, Lincoln.

Two brothers, who have been in some very hard fighting; both are in the 4th Lincoln Territorials. The former is in hospital at Lincoln seriously wounded.

Lance-Sergt. E. Purvis, Loughton, Bletchley, Bucks.—2/1st Bucks.

Lance-Cpl. John Miller, West Shield Hill, Morpeth.—1/7th Northumberland Fusiliers.

Spr. A. H. Hamshar, Eastwood Road, Bramley, Guildford.—R.E. A frequent contributor to our columns.

Pte. A. Smith, 206, Croydon Road, Caterham Valley, Surrey.—R.A.M.C.

BLURTS FROM A SCRATCHY PEN.

THE BUSINESS OF HONEY PRODUCTION.

Again through another season. In the soft springtime and the hot summer we have watched our colonies. We have seen the cluster expand until it filled the hive to overflow. We have noted the tired workers gathering in from orchard and meadow, so tired, and so overburdened, that they scarce could touch the alighting board, and, most satisfactory of all, we have seen the store of honey accumulate. For, after all, I have fears that there are but few who work for the higher motive, that is the interest in, and desire to be better acquainted with our insect friends. To such as these I raise my hat in salutation and respect; but to most of us by reason of the hustling, bustling times in which we live, we have to consider our hobby in the light of how much profit in currency of the realm we may draw from it. We are compelled to be sordid. Governed by the same idea, a first beginner also asks the question: Will this investment pay me? And as, with well-directed and intelligent attention the harvest accumulates, the question must arise, Can I find a market for all the honey I may produce, and how? It also follows as a natural sequence that if a producer finds that there *is* a market he will increase, or at any rate endeavour so to do, his output, and others, hearing of his success, will follow in the same lines. Therefore, any endeavour to create, or establish, such means as will enable the bee-keeper to dispose of his harvest to a good advantage will operate in two ways. It will stimulate those who are already expert, and encourage others who are doubtful, to the greater advantage of bee-keeping in general.

This, therefore, is the purpose of the

present article, and with the favour of the editor perhaps two or three others. The time is ripe. We notice at regular intervals the report of how many thousands of pounds in value have been, or are being, imported into this country. We recently heard of some tons of honey (Colonial) being purchased and used for the good of our armies. We notice our Colonies and other honey-producing countries are forming plans and concocting schemes to invade our markets. We know that, properly organised, we are capable of producing ourselves, in these "tight little islands," all the honey which can be consumed in them, and that of a superior quality. Why, then, should we allow outsiders?

And yet, although the subject is controversial, and a controversy is desired on it, the writer does not propose to enter into the argument himself. It might almost be stated that it is proposed to treat it in an historical, statistical manner; that is, the tale will be told of previous experiments of the same nature, and their results. It will be mentioned what other people are doing on the same lines, and as far as can be ascertained what has been their success? The writer has not the conceit to think he is going to solve the riddle, but it is quite possible that from the ideas of many minds something of good may emanate. If we propose to hold our own, and not to be snowed under, a commencement must be made.

One other point. It may, and probably will, be said by some who, at the present moment, are producing honey in fairly large quantities, that they have no difficulty in finding a market for their honey. So far, so good, and very commendable. But this, to me, has the air of trifling with the question. Honey, with all its acknowledged excellence, should appear at every table equally as much as jam. It should be an article of daily food. If this could be established (and it can only be managed by combined organisation), then the amount of honey now produced by the, at present, large apiaries will be very small fractions of the whole quantities demanded. At the hour it is almost a luxury. To sum up, the proposition seems something like this: We have a wealth of home-grown food to be gathered; for lack of method only a very small portion is gathered. How shall we improve our methods? and, having improved them, how shall we deal with the result? The reply seems to be: (1) The public must be made better acquainted with what we are offering. (2) They must be able to procure it at a reasonable price. (3) Last, and by no means least, it must be presented in a form that will be attractive.—Jno. Smallwood.

A DORSET YARN

October 9th, a warm week-end with plenty of sun, the hum of the bees is like a May day; they are off quickly and high, and others coming home laden with pollen of a deep orange colour. Round here there is plenty of gorse, and some heather not yet browned off. The sunflower family, golden rod, and late autumn daisies are very abundant. The merry hum of content is unusual at this time of year, but there are still some bees who want to rob, and it is the Italians that lead the van. How difficult it is to stop the pirates only those who have had some of it know. Glass in front of the hive entrance is a good thing, but some I have shut entirely. The robbers soon tire of crowding round the entrance and the lifts of the hives.

Honey this year is in great demand; clean, well-filled sections sent on to the dairies have realised the highest prices ever reached at the Violet Farm. I sent to Mr. Bowen, of Cheltenham, for some of his cardboard facings. They looked very neat in the white cases, and, more than that, they packed so much simpler, and saved a lot of labour and cost of glass.

I suppose so many bees dying in different parts of Britain has sent up prices somewhat this year. If only our cottagers would take to more bar frame hives, how much more would they get for the produce of the bees. But they will tell you, "My father always had skeps, and done very well, and what's good enough for him is good enough for me." If only those who have leisure would take a holiday and yarn on bees in the parts of England, far from the railways in rural districts, great good could be done. I know many socialists whose only holiday in the year is spent in a week's propagandist tour at their own expense. Those who are enthusiastic in the insect kingdom surely might do similar work. Years ago I heard Mr. Tilley, of Dorchester, lecture on bees for the County Council, but all these men who are traders, however clever and expert they are (and Mr. Tilley is very clear in his teaching) are never listened to with so much interest as the enthusiast, who yarns for nothing, and has nothing to sell, as the traders have. It is just the same with poultry lecturers, most of the experts are traders in birds and appliances, and recommend the birds and the houses they make.

Many who have read Maeterlinck's "Life of the Bee" would think a lot of it very far-fetched, and think his flowing language was straining the truth, but those who have watched them know that the song of the bees is a reality; for instance, his description of the "marriage song" of the virgin queen, which sends all the

males from every hive to take part in the nuptial flight. Only twice in my long life have I seen this; I suppose because I am a very busy man. One would never think there were so many males in the hives as there are when the queen sounds the wedding assembly. I have been on the parade ground when the bugle sounds the assembly, out of every tent the men are hurring up into line—so the males out of every hive at the sound of the nuptial assembly. As the song of the virgin queen is sung continuously as she flies round and round the hive from which she came (so that she will know it again), the loud hum of the males seems to be more and more shrill. It seems to send them to the verge of intoxication, and they keep hurrying out of the hives. It reminds me of the Pied Piper in Browning's masterpiece, where the town was eaten out with rats. The piper blew his pipe in an enticing strain that appealed to the rats, and, the poem states, "Out of the houses the rats came tumbling, big rats, small rats, black rats, grey rats, grave old plodders, gay young friskers, cocking tails and pricking whiskers, fathers, brothers, uncles, cousins, families by tens and dozens all followed the piper for their lives." At the sound of the nuptial call of the virgin queen so out of the hives the males come buzzing, old males, young males, black males, brown males—all follow the virgin queen in her nuptial flight. And what a lot of drones there are in some hives; it is only at such times that one sees so many, the great lazy things that the bees rear and feed with such care, only to kill off when they have no further use for them.

It would be a good thing if all horticulturists who keep bees were known to each other. At the Royal Horticultural Society's Hall, in Vincent Square, the growers meet fortnightly throughout the year; yet I have never met anyone I know who is enthusiastic with these industrious little creatures. I suppose it is one thing at one time; yet they are so indispensable to horticulture that to me bee-keeping is part and parcel of it.—J. J. KETTLE.

ECHOES FROM THE HIVE.

BRIDGNORTH AND DISTRICT.

Season 1915.

The honey in this part of the country, to those that have any bees left, has been a good average crop. The fruit blossoms, sycamore, hawthorn, and beans, together with the glorious sunshine of May and June, provided abundance of nectar for the willing workers. Those "bee owners" whose enthusiasm exists only at swarming-time, have naturally had poor "takes." The "Isle of Wight" disease is still playing havoc with our industry. I know of one apiary where bees have been kept for about sixty years, and now, for the first time, the bee-keeper is "beeless." I, myself, up to the present time am a lucky one, as far as the bees are concerned. I have taken from twelve hives about 600lbs. of honey this season, and had two swarms, and have left sufficient stores for wintering without feeding. For several years it has been my custom to winter my bees with a super in position, without the excluder. Those stocks that have insufficient stores for wintering I leave more of their natural stores in the super, according to my judgment. I find that this plan suits my district, and my bees have always been ready to take advantage of the first honey flow. On Oct. 1st I examined the condition of my stocks, and found that each stock contained more brood and eggs than I have ever seen before at this season of the year. One hive had brood in five combs, four of the combs being well filled. I have packed for winter fourteen stocks in the pink of condition. I destroyed and burnt seven stocks of bees recently for some neighbours (who were excellent apiarists) only a mile away, as they were affected with "Isle of Wight" disease. As the "winter of our discontent" is fast approaching, for further results we must "wait and see."—W. SHUKER, Middleton Scriven, near Bridgnorth, Shropshire.

THE HOLLYHOCK.

The following little poem appeared anonymously in the columns of the *Daily News* some five years ago, and is surely worth perpetuating in the pages of the *B.B.J.* H. E. Scrope Viner.

The steeple sways
Its silent bells,
To call the cloistered bees
To leave their cells
For prayer and praise.
Their "Gloria Tibi Domine"
Echo like distant seas.

A muffled peal
Perfumes the air,
With many a fragrant chord;
While incense rare
The bees unseal,
And in their daily task reveal
The Glory of the Lord.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

BLACKS *v.* ITALIANS.

[9191] I beg the liberty to reply to the articles on Italian bees. One person states that the colour of the bees makes no difference. How is it then they are more prolific?

They are "chronic robbers." All vigorous bees will rob, as they are bent on getting stores, and as Italians are so easily noticed among Blacks it gives that view. Where Blacks are largely kept it is not noticed when they go in and out of each other's hives. Fancy chronic robbing among those 200 hives, as per photo of Italian apiary in last year's JOURNAL! It is also stated that experienced bee-keepers stock Italians. That gives the game away. Fancy up-to-date bee-keepers stocking useless bees! The reason that some bee-keepers attack Italians is that they do not wish them to become general, as they only want them for themselves, and people would also soon have more bees than they require. That is not good for bee-sellers. Also it is stated that they are boomed only to sell the queens. Why, anyone could just as well rear and sell Blacks if they wish, but persons who rear and sell Italians know they are doing justice to others as well as themselves. I have seen enough of Blacks to avoid them as much as possible, as one can handle Italians with pleasure and build up stocks after the great losses of "Isle of Wight" disease. One stock of mine, a nucleus in May, has made nine lots, large and small, and the queens are still breeding *now*, while *most Blacks have done*. The fault—if it is one—is that the Italians require a large brood nest, and they upset the cut-and-dried rules made for Blacks. If you have a valuable queen, clip the wings, and you will not lose a prime swarm; also if robbing takes place by either bees or wasps, have a tin with a tight fitting lid with a piece or two of lump ammonia, put that up against the entrance of hives concerned, and note the retreat. You could also keep a carbolic cloth in the tin; that will help to subdue vicious Black bees. I think frankly that those who are out to despise the Italian bee mislead others by abuse and not fair argument. Some Black stocks do well, why not? But by continual inbreeding for generations they are getting weaker and weaker, hence they die fast and have got to go.—ARTHUR TROWSE.

BEES ON THE WEST COAST OF AFRICA.

[9192] If I am not too late I should be only too pleased to help the friend of your correspondent, "J. C. G.," Westport, Ireland—query No. 9027, "B.B.J.," August 26th, 1915.

I have kept bees here for a number of years—six or seven years, anyway. *Apis adansonii* are here in any quantity, and they are very fine little workers. There are also plenty of the black race (Tunisians) here as well.

The black coloured wax you refer to is black owing to the treatment it receives at the hands of the natives, who tear out a nest and mix the whole lot, wax, propolis, and any other rubbish there may be in the nest, all up together.

I hived a swarm of bees (*Apis adansonii*) on the 16th inst., and looked at them yesterday. They had drawn out five combs of the most beautiful white cells one could wish to see.

There is a very fine opening for bee-keepers in this place, if anyone felt inclined to start the business on up-to-date methods with "Italians." The latter are necessary on account of the waxmoth, especially the smaller one. Hives specially suited to the place are also necessary. I make my own now. As a matter of fact, the business is distinct and different from bee-keeping in England, so that to attempt to describe it in a short letter is out of the question.

My letter is much longer than I intended it to be. I must apologise for trespassing at such length on your space. —WEST COAST.

REVERSIBLE ENTRANCES.

[9193] In the current week's issue of the JOURNAL Mr. W. Bradburn, in his article on taking bees to the heather,

states that his hive entrances are reversible. By this does he mean the alighting board is hinged so as to form a door? I have always found that after a time these do not make a bee proof entrance. I should also like to know how he fixes his hinges. This article is of great interest to me, as we have miles of moors in this district. Perhaps Mr. Bradburn would give us a drawing of his entrances on a large scale.—L. H. SMALES.

A PRESENT DAY TRIP ON THE CONTINENT.

[9194] I am not sure whether you will consider the following few lines of sufficient interest to place before the readers of the JOURNAL, but as nearly everyone has friends or relatives taking part in this regrettable struggle, I will state briefly some of the happenings to friends, with some of the points of our Allies and their beautiful country, leaving names strictly alone, as I am bound to do.

In the first place we are filled with interest and excitement, sometimes tempered with the sadness of good-byes, interest in the various machines of war being loaded in the steamers, and wonder as to which is our particular steamer. Here horses, there ambulances, cannon, waggons, men—a continual stream. When our time has come we slip away generally in the shades of night, with some boat or other gliding along by our sides, with countless, it seems, glows of shiplights, which shows that even here we are not forgotten. In the morning we are at the shore of our destination. In my case I continued another day on board, and had a trip along a splendid river, whose banks were composed of steep, beautifully-wooded slopes, interspersed with small villages, the inhabitants of which were most kind and enthusiastic in their reception by flag waving, etc., while the various renderings of "hip, hip, hooray" and "Are we down-hearted?" were very amusing. I have been moving generally in an absolutely rural district. There seems acre upon acre of pasturage, rich with clovers, countless fruit trees; but, strangely for a rural country, I have only seen one hive of bees. Wasps are having a fine time feasting upon the residue of tins of jam, etc., to say nothing of the fruit which is being neglected through lack of labour. Our friends seem very indolent in their methods of work and dilatory in their methods of sanitation, but in the former we must not judge too harshly, as most of the men are away, and the women certainly use some energy. I have seen several poor horses made to work on a revolving platform to thrash corn. We shall certainly have to get more friendly—if possible—with the French, and get them to work more "humanely," and to take more advantage of the waste of honey, etc., after the war. But we have something to learn in the way they take advantage of roadsides and waste ground for fruit production.

Page 369. "Popularising the Journal."

I, too, wish this were possible, but ours is a minor industry, and it is generally "left to order." Cannot something be added by way of "Personal and home hints," including "For women." By this means we could considerably add to probable bee-keepers perhaps; for instance, I tried at two London terminus and could not get a *B.B.J.*, and when we are comparing sugar *v.* honey and honey *v.* kidney trouble, here is something we can all be interested in with profit, and this is not all; "ideas create interest." Send them on for the personal column.—A. H. HAMSHAR, "Somewhere in France."

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. Alt questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith There is no fee for answering questions.

J. M. (Huddersfield).—*Drone Breeding Queen.*—The queen is a native, and has not mated. We cannot say what has happened without further particulars, but probably the old queen was killed either by the bees, or accidentally when moving the hive to the moors. If the colony is weak, unite it to another one.

E. R. SHEPPARD (Stourbridge).—Thanks for queen, which arrived safely. You have made a great onslaught on the wasps by taking 118 nests, but 1,337 young queens in one nest is abnormal. The usual number is not more than several hundreds.

Honey Samples.

BEGINNER (Cumberland).—No. 1, from clover, dandelion and other sources; density and quality good; No. 2, from

clover and fruit bloom; No. 3, fruit blossom and other tree honey, these are both good medium colour honeys, density not so good as No. 1; No. 4, mainly clover and a little ragwort, fair quality, density not so good as any of the others.

Suspected Disease.

Novo (Gillingham).—We do not find disease in the bees sent.

J. BANTING (Falfield), G. Stevenson (Bradford), X. Y. Z. (Grantham), R. D. Vick (Monmouth).—The bees are suffering from "Isle of Wight" disease.

A. FRY (Gillingham).—Your diagnosis is correct, it is "Isle of Wight" disease. Burn bees and contents of hive. Spread quicklime on the ground about where the hive stood, and, if possible, dig it over. Spray the alighting boards of the other hives, also round the entrance with a solution of 1 teaspoonful of Izal in 1 pint of water. Keep Naphthaline and Apicure in the hive, and medicate the food with Naphthol Beta, or one of the advertised remedies for "Isle of Wight" disease.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

WANTED, Rymer honey press, secondhand.—Price, &c., to HODGES, Shield-street, Newcastle-upon-Tyne. v 51

WANTED, 56lb. and 112lb. honey ripeners, with strainer, in good condition, cheap for cash.—Price, including carriage, to MOSS, 64, London-road, Hinckley. v 52

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, honey in bulk.—Sample and price to W. H. WYATT, Bishopswood, Chard. v 50

6 NEW bar frames, folding fronts, double storey section crates; 2 glass observatory bee-hives; 6 artificial feeders; other sundries for sale, cheap; offers.—BELL, 12, Barnard-street, Blyth, Northumberland. v 49

BEES for sale, 3 strong, healthy stocks, Standard hives, each stock on ten frames, 25s. each.—J. PAVITT, Earlswood, Rectory-road, Little Thurrock, Essex. v 48

2 CWT. fine English honey, 65/- per cwt., in 28lb. tins, samples 3d.—PENTNEY, Bramfield, Halesworth. v 47

FOR sale, about 20 W.B.C. hives, with lifts, crates, feeders, queen excluders, W.B.C. section racks, honey ripener, and other accessories, all in excellent condition, cheap for cash; or exchange entertained. — Apply, 4, Elderton-road, Westcliff-on-Sea. v 46

FOR sale, several cwts. of very fine light clover honey, in 28lb. tins, 60s. per cwt., f.o.r.; also some good heather honey, 60s. per cwt.—CROWE, Stawell, Bridgwater. v 45

FOR sale, quantity bee appliances, extractor, ripeners, uncapping tray, knives, feeders, excluders, new frames, W.B.C. ends, super clearers, &c., all cheap, as owner going abroad. Write, stating wants.—BLACKBOURN, Minster, Ramsgate. v 44

FOR sale, 2cwt. light honey, £3 per cwt., in tins, free on rail, cash with order, samples 2d.—EDGAR CAFF, Hillcoose, Grampound-road, Cornwall. v 43

LINCOLNSHIRE extracted honey; 1cwt. in 28lb. tins, 60s.; screw-cap 1lb. jars, 1 gross, 9s. 6d. per doz.—ROPER, Thorpe-on-the-Hill, Lincoln. v 42

WANTED, good lantern slides on poultry-keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, for dissecting purposes, old worn-out or otherwise useless queens, alive.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR DRIVEN BEES.—A gross dovetailed Standard frames, 10s.; two dozen bottle feeders, 1s. each; Porter bee escapes, 1s. 6d. each; slotted separators, 6d. dozen.—Box 10, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the NAMES and ADDRESSES, together with the REGIMENT and RANK, of any bee-keeper serving his King and Country; also if killed or wounded.

We print below a further list of names to those sent in. We shall be pleased to have other names as soon as possible.

Lce.-Cpl. John Gordon Quale, Glenmay, Isle of Man.—8th Batt. Black Watch; wounded.

Lce.-Cpl. A. G. Curtis, Stoke Bishop, Bristol.—1st Batt. Dorsets.

Pte. P. W. Baker, Stoke Bishop, Bristol.—Signallers' Staff, 3rd Dorsets.

Pte. E. H. Tunmer, Maldon, Essex.—24th Batt. London Regt. ("The Queens").

Pte. Jas. Petrie, Gillyburn, Murthly, Perths.—A.S.C.

Pte. Ernest Alexandra, Robin Hood Inn, West Malton, Wisbech.—Camb. Batt. Suffolks.

Pte. John Shelton, Strixton End, Wollaston, Northants.—R.A.M.C.

You are asking for names to insert in your Roll of Honour.

My only son, Lce.-Cpl. John Gordon Quayle, aged 20, 8th Batt. Black Watch, was wounded at Loos in recent advance; now in Gartshore Convalescent Home recovering rapidly.—LANCELOT QUAYLE.

You will be pleased to hear that Pte. E. H. Tunmer, formerly of Maldon, and now in the 24th Batt. London Regt. ("The Queens"), has expressed a wish to have his name added to your Roll of Honour. Although he has been at the front since last March he is still very interested in bees, and the BEE JOURNAL finds its way to France every week.—D. HAVARD.

Re a Roll of Honour.

I beg to send you the name of my son, William Shelton, who volunteered for service in the R.A.M.C. as soon as the war started. He has helped me with the bees since being quite a little lad, and the last few years has kept them on his own account. On the 29th of Aug. last year he was successful in winning the Silver Cup at Olney (Bucks.) Honey Show, and on the 31st was called out, and after serving 12 months at Woolwich Hospital was ordered out to the front, and is in France now.

I am very sorry to say I am afraid his bees are attacked with the dreaded "Isle of Wight" disease, although I have done all possible for them. Since he has been gone three very strong stocks have died, hitherto we have not had it, but this autumn it seems to be playing havoc in our district.—JOHN SHELTON.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. HERROD-HEMPSALL,
Secretary.

BRITISH BEE-KEEPERS' ASSOCIATION.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, October 21st. Mr. W. F. Reid presided. There were also present Miss M. D. Sillar, Sir Ernest Spencer, Rev. F. S. F. Jannings, Messrs. C. L. M. Eales, G. W. Faunch, J. Smallwood, A. G. Pugh, T. Bevan, G. W. Judge, J. B. Lamb, J. Herrod-Hempsall. Association representatives: Messrs. G. R. Alder and G. Horscroft (Essex), G. Bryden (Crayford), G. Hayes (Notts), and the Secretary, W. Herrod-Hempsall.

Letters of regret at inability to attend were read from Messrs. T. W. Cowan, G. J. Flashman, J. Price, J. Steel, General Sir Stanley Edwardes, and Dr. W. Anderton.

The minutes of the Council meeting held on September 16th, were read and confirmed.

Mr. J. Fyfe was elected a member.

The report of the finance committee was presented by Mr. Smallwood, who stated that payments into the bank for September amounted to £6 19s. Payments made in September, £74 15s. 6d. The balance at the bank at the end of September was £113 13s. 5d.

The report of a preliminary examination held in Cumberland was presented, and it was resolved to grant certificates to Misses D. M. Hall, L. M. Le Patourel, Messrs. M. Harrison and H. W. Cousins.

It was resolved to make an appeal in the BRITISH BEE JOURNAL for honey for the wounded soldiers in the London Hospital.

Next meeting of the Council, November 18th, at 23, Bedford Street, Strand, London, W.C.

THE DAIRY SHOW.

The Fortieth Annual Show of the British Dairy Farmers' Association was held in the Agricultural Hall, Islington, N., on October 19th to 22nd inclusive. The Council gave the question of holding their annual show this year very careful consideration. The number of entries have quite justified them in the decision to hold the show as usual, the total number being only 106 below those of last year, and of these the entries for honey, &c., were 49 below those of last year. the entries for honey in 1914 were 126, for this year they were 77. The lowest number of entries for the last ten years were 67 in 1907. The quality of the honey and wax was very good. Only one "trophy" was staged, Mr. J. Pearman being unfortunately unable to get his honey, &c., conveyed from Derby to the show. Class 91 for dark honey, and Class 98, wax for the retail trade, were cancelled, and in Class 99, for an interesting or instructive exhibit, there were no entries. The judge was Mr. W. Herrod-Hempsall, who made the following awards:—

Class 89.—12 *Jars of Light Coloured Extracted Honey* (21 entries): 1st, Mr. J. Pearman, Penny, Long Lane, Derby; 2nd, Mr. F. W. Blake, Watts Lane, Rochford, Essex; 3rd, Mr. J. S. Hicks, High Fordon, Hunmanby; 4th, Mr. J. Rees, Tyllwyd Farm, Lisvane, Cardiff; reserve, Mr. W. J. Goodrich, 2, Oxford Street, Gloucester.

Class 90.—12 *Jars of Medium Coloured Extracted Honey* (20 entries): 1st, Mr. G. Bryden, Hamilton House, Star Hill, Rochester; 2nd, Jas. Lee and Son, George Street, Uxbridge; 3rd, Mr. J. Pearman; 4th, Mr. W. B. Allister, Throckenholt, Wisbech; reserve, Mr. A. S. C. Fell, Longwall, Walton-on-Thames.

Class 91.—12 *Jars of Dark Extracted Honey*: Cancelled.

Class 92.—12 *Jars of Extracted Heather Honey* (6 entries): 1st, Mr. J. Pearman; 2nd, Mr. J. Lamboll, Chiddingfold, Surrey; reserve, Mr. Wm. Burn, Phœnix House, Whitby.

Class 93.—12 *Jars of Granulated Honey of* 1914, *or any previous year* (8 entries): 1st, Mr. W. Garwell, 71, Thirlwell Road, Heeley, Sheffield; 2nd, Mr. J. Pearman; reserve, Mr. J. T. Willson, York Villas, Shirebrook, Mansfield.

Class 94.—12 *Sections of Honey, other than Heather* (5 entries): 1st, Jas. Lee, and Son; reserve, Mr. J. Pearman.

Class 95.—6 *Sections of Heather Honey* (7 entries): 1st, Mr. R. Robson, Cheviot Street, Wooler, Northumberland; 2nd, Lady Gertrude Crawford, Coxhill, Lymington, Hants; reserve, Mr. F. A. Wolley, Kirby Hall, Boroughbridge, York.

Class 96.—*Display of Comb and Extracted Honey of any year* (2 entries): 1st, Jas. Lee and Son.

Class 97.—*Wax, not less than 2lbs., in two Cakes only* (14 entries): 1st, Mr. J. T. Willson; 2nd, Mr. J. Pearman; 3rd, Mr. F. Harris, High Ferry, Sibsey, Boston; reserve, Mr. C. H. Rose, 159, Blagdon Road, New Malden, Surrey.

Class 98.—*Wax, suitable for the Retail Trade*: Cancelled.

Class 99.—*Interesting and Instructive Exhibit of a Practical or Scientific Nature*: No entry.

Excluders (p. 236.)—D. M. M. is no doubt right in saying that queen excluders are not generally used by regular producers of comb honey, it being understood that such producers are experienced bee-men. But there are times when one is obliged to wish that the excluders *had* been placed below the sections. Not always for the exclusion of the queen, for the woodwork itself acts fairly efficiently in discouraging the mother bee from investigating the upper chambers, particularly if there is a sufficiency of drone comb below. But the zinc has some value as a pollen excluder, and if I find a colony inclined to place pollen above the brood nest, I give it a queen excluder, and perhaps a set of shallow frames below the sections. With shallow frames containing drone comb, and even with sections fitted with

starters of foundation, excluders are almost a necessity. I do not think that they hinder the work where full combs are given above, and where these combs are at once adopted. But it is possible that ventilation may be interfered with somewhat by the ordinary sheet excluder. The framed excluder, allowing beeway above the frames, is much superior in this respect, as also is the wood and zinc pattern if the slots are set to correspond with the openings between the frames. The Wilkes' type has special advantages so far as ventilation is concerned, but it may not be so efficient as a queen excluder. Specimens which I have gauged vary a good deal in the spacing, and would hardly deter a determined queen.

Which is the Dominant Race? (p. 239).—This is a query which agitates wider pools of thought than our own. None but Time itself can truly answer. Undoubtedly the dominant race is the one which can survive and conquer assault, whether of disease or other ill. But to be really dominant it must apparently suffer. "Evil that good may result." One point perhaps overlooked by Mr. Taylor is that a native race is not necessarily strong enough to withstand an imported disease. Particularly an island race. And the evidence tends to prove that the present epidemic is imported. There are those who argue that we should further import the germ-carrying bees to fight the invader. This advocacy of hired mercenaries savours a good deal of the virtue said to reside in the hair of the dog which bites us. My own sympathies lie unquestionably with our native bees, who are apparently putting up a fight, now that the first shock of surprise is over, which brings us to the very pertinent query asked by Mr. Taylor, "What do we gain by introducing foreign bees?" So far as my own experience of foreign races goes, I would echo, what indeed? I am glad to note a growing body of opinion, based, I believe, upon practical experience, in favour of our island bees. If these bees survive the epidemic we may expect a further improvement in them. If they do not, we shall, of course, be forced to adopt another race. But for all-round reliability, ease of handling, quality and quantity of produce, including their laudable provision for winter, and especially their outdoor wintering qualities, our bees are hard to beat.

Exposed Nymphs (p. 240).—I recently came across several cases of this kind in skeps in the South of England. The bees appeared to be healthy, but were much reduced in numbers, and most of the brood was not capped over, although in the advanced nymph stage. As in Mr. Heap's case (p. 315), I am quite convinced that the condition was not due to the presence of wax moth, which is the usual explanation given in the text-books. There was no trace either of wax moth larvæ, or of their cocoons, and the cell walls, so far as I could see, were undamaged. Again, the open mouths of the cells were quite regular and slightly reduced in size. I feel sure that the true explanation is the one given by Mr. Heap, and that the phenomenon is due to a shortage either of labour or of newly secreted wax. Probably both, as we know that bees will remove or borrow surplus wax within the hive when wax secretion normally ceases.

BLURTS FROM A SCRATCHY PEN.

It is wise to turn back and consider the chronicles of those who have gone before us, and from our special interest there are few more interesting annals than those of the BEE JOURNAL in its very earliest years. We live again with its first editor, Charles Nash Abbott, and we figure to ourselves the motives which urged him to commence his task. Bee-keeping then, was but as a hotch-potch of many men's ideas, traditions, and even superstitions, and he had firm faith that, given good leaders and organisation, there was an important and useful future in store for the industry, and he also recognised that whatever might be the undertaking, art, craft, or philanthropy, unless it had an acknowledged association of its members, headed by a controlling council who would make its business, their business, and could speak and act in its interests, such an undertaking was dumb and useless. So early, therefore, as the first number of the BEE JOURNAL, in a special supplement, the editor brings to notice, and for discussion, a scheme for a "Bee Guild." The author of it hides under the initials "H. W. T.," but correspondence in later numbers of the *Journal*, and its general ability leads us to think that the humility of the "initials de plume" conceals an important identity. It is too long to quote, and most of the matter of it is outside the subject now in hand, therefore I only select the second suggested rule for the purpose of showing how, even in the very beginning, the necessity was understood of organising in the interest of bee-keeping a market for the sale of honey. The rule alluded to runs as follows:

"2nd. To establish a central market "or depôt for the sale and purchase of "bees, honeycomb, honey, and every kind "of bee gear, which should ensure to all "members wishing to sell, honourable and

"practical endeavours to obtain the "highest market for their deposits, &c."

It is obvious that the above suggestion is the very skeleton of a system; one might even say very bare bones, too. Yet the idea seems to have "caught on." There is considerable correspondence in the BEE JOURNAL of 1873, 1874, and 1875, both *pro* and *con*, many suggestions and improvements were offered, and in a measure there were some attempts made at the Crystal Palace Bee and Honey Shows of 1873, 1874, and 1875, to commence such an endeavour. But looking at this latter show from the experience we now have of over forty years, it is quite evident they had a superabundance of energy and tried to do too much. There was a "menu" which would have satisfied even the greatest glutton. There was the exhibition of "bee gear," seven classes honey, 18 classes comestibles, three classes miscellaneous, five wax, and of inventions "to advance the culture of bees" three classes. It is interesting to note among the awards the following:

"The first prize (£5) in this class (8) "for the largest and best harvest of honey in the comb from one stock of bees" was "taken by T. W. Cowan, Esq., of "Horsham, with a pair of bar supers of "a total weight of 86½lbs.; also a silver medal was awarded to Mr. Cheshire for improved wax guides in frames."

In addition to all these "pièces de resistance" there was the manipulation of skeps and demonstrations of the varied appliances, so that visitors had quite their money's worth, but it would seem as if the garnishing had to a great extent hidden the purposes of the show, *i.e.*, the promotion of a market for honey. Yet, at the same time, they produced a negative result, not so much apparent at the moment, but which has been felt since then. And there is also this much to be said: Perhaps it was a little premature. Thus first they began to advertise by "booming" honey. Of course, the public had to be educated, and the crowds who thronged underneath the dome of the Palace, who saw bees handled like flies, and the golden "chunks" of honey, went away with quite a different idea of the product of the hives to what they had before. In other words, the public were honey educated; and there is still a lot of this to be done even now.—J. SMALLWOOD.

BELGIAN REFUGEE FUND.

Readers of the JOURNAL and RECORD will recollect that we opened a fund for the Belgian Refugees nearly a year ago. The result was contributions in cash £2 10s.; honey and wax, etc., which were sold for £1 11s. 2d.; a total of £4 1s. 2d.

As the offices of the War Refugees Committee are only a few minutes' walk from Bedford Street, I took the cash across personally, that I might make a few inquiries and get some idea of what is being done. Just by the side of General Buildings, Aldwych, the committee have a large single story building originally built for a skating rink, where the refugees themselves are attended to as they come over, and those in charge have no sinecure. The work in the early days of the war, when they never knew when, or in what numbers, the refugees would arrive, was very heavy, but the officials make it their boast that no matter how many there were, food and some kind of sleeping accommodation were found for them. I was courteously shown round, and the work explained to me. This large floor space has been railed off into different divisions. At the far end is a buffet where refreshment may be obtained at nominal charges. In another place a card index of every refugee who has passed through is kept, not only the name, and address from which they came, but where accommodation or work has been found. This index is open to all incoming refugees that they may try and find some clue to lost relatives, and many touching stories can be told of the reunion of families that had been scattered on the invasion of their country, no one member of the family knowing where the others were until they were found in this country. In another part was a military bureau, and every man before being helped by the committee has to satisfy this bureau that he is ineligible for the army. In still another part was a postal bureau. Round the other parts of the building were shelves for storing what few belongings these unfortunate people were able to bring with them, until they had secured homes or work.

I found I had the choice of paying the money into the general fund, or of allocating it to be distributed, at the discretion of those in charge, to refugees in need of *immediate* assistance, and, from what I could gather from the inquiries I made, I came to the conclusion that the money would be most advantageously used and do the most good in the latter way, especially as those in charge of that department were—and still are—very short of funds. An account of how the money was expended was promised. The work here is under the charge of the Hon. Mrs. Lyttelton, and on Oct. 13th the letter and account following were received.

The Editor,
BRITISH BEE JOURNAL,
23, Bedford Street W.C.

Dear Sir,—In July last you were kind enough to make me a present of a cheque

of £4 1s. 2d., to be used at my discretion for the relief of Belgian refugees. This money has been most useful, and I have much pleasure in sending you herewith an account of the manner in which it has been spent. You will notice that in several cases it has been the means of keeping a home together until that particular refugee became self-supporting.—Again thanking you for your kindness, I am, yours faithfully,

EDITH LYTTELTON,
For the War Refugee Committee.

"BEE JOURNAL" FUND.

	s. d.
Vermeire.—Allowance for expenses till wages are paid	6 0
Grad.—Allowance whilst seeking work	10 0
Joosen.—Allowance for expense till sent to country	5 0
Hauwaerts.—Allowance for boots for girl starting work	12 6
Martron.—Allowance for rent, man out of work owing to illness	5 0
Claeys.—Allowance to refugee, arriving late at night, to cover lodging	3 6
Priest.—Journey money for priest going to Glasgow to find sister	5 0
Morriens.—Allowance to two wounded soldiers	5 0
Lauwers.—Allowance to three elderly ladies for journey money	10 0
Vlaminck.—Allowance for expenses till wages are received	3 0
Speliers.—Allowance to discharged wounded soldier for personal expenses	10 0
Deroitte.—Allowance for personal expenses, invalid refugee	5 2
De Raeve.—Allowance for cost of glasses	1 0
	£4 1 2

If any reader would like further particulars I shall be pleased to give them. I may say this department is still in urgent need of funds, though a small grant has just been made from the general fund, and if any of our readers will send further contributions, either in cash or kind, they will be most gratefully received. I am sorry to say that, owing to circumstances entirely beyond their control, some of these unfortunate people have lost much or all of what few goods they were able to bring with them. We have still three bound volumes of the RECORD for 1910, 1911, and 1912, and a hockey stick for sale for the benefit of the fund, and shall be pleased to receive offers for them.

J. HERROD-HEMPSALL,
Manager.

BEE-KEEPING AND FRUIT CULTURE.

A gentleman who is desirous of taking up fruit growing and bee-keeping has written to us for information as to the suitability of several districts for this purpose. We shall be greatly obliged if any of our readers can give us information about them. His inquiries are as follows: Are Herefordshire or Worcestershire good for bee-keeping, or are there parts of these counties that are? If so, where and which flowers give the main honey crop? If there is any difference, which of the two counties is the better?

Which are the best districts for bee-keeping in Hampshire? Is the quadrangle, Alton-Farnham-Haslemere-Petersfield, specially good?

WITH THE BEES AT THE FRONT.

By SERGT. A. G. ATWELL.

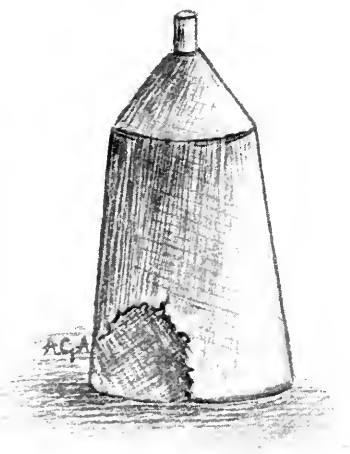
(*Continued from page* 368.)

In the afternoon we reached Mauberge; here we rested at the roadside for about four hours. It was at this village that we received our first pay, although we needed very little money, as the people would give us anything. We moved on again to a somewhat larger village for the night, the name of which I have not entered in my diary. We slept in the village square, most of us. The place was also crowded with refugees, who were sleeping for the night anywhere they could find room to lie down. I remember a few wounded being brought to the village; they were chiefly cavalry scouts, and had been wounded in a skirmish with the German outposts. We moved a little further on the next day, and got into action for the first time. We held out as long as possible against the advancing hordes of Germans, but on Monday, the 24th of August, we were compelled, in the face of greatly superior numbers, to start our retirement. Of course, this was at about the same time that the retirement from Mons took place; our brigade was on one of the flanks and not actually at Mons itself. We were fighting rearguard actions every step, and had some very heavy marching. We passed through the town of Soissons on Monday, the 31st. We reached the farthest point of our retirement at about 5 o'clock on September 2nd, having been pressed back to within a few miles of Paris. In fact, rumours were current among the troops that we were actually going there to help hold the forts. However, I am glad to say this was not necessary; for, as everyone knows, we turned about and drove the Germans right back to their positions on the Aisne. During this advance to

the Aisne I made the following notes. Started our advance on Thursday, September 3rd; that evening, while resting, was shaved by a lady barber, a refugee. For several days after this I made no entries, but if I remember rightly it was nothing but continual marching, with scarcely any time for food or sleep. On the 8th we passed a lot of our cavalry, men and horses who had been killed while fighting the German rearguard. This commenced the battle of the Marne. For several days we still continued the advance. All the villages we passed through now had been looted by the Germans; shops broken open, wine cellars looted, cattle and poultry killed and eaten, their entrails being thrown about the ground. It was on the 12th of September that I came across the first looted apiary. Of course, I expect I had passed several such before, but being hidden behind the hedges, etc., it was not always easy to see them in passing. However, the one I mention was standing right in the open, about six yards from the road, with no hedge or fence of any description to shut it off from passing traffic. Of the nine or ten hives (or rather straw-thatched skeps) only about two seemed to be undamaged. Others were burst open, exposing both comb and honey, while others, judging by the empty stands, had been carried completely away. The troops passed this spot pretty quickly, for, of course, the bees were not in the best of tempers. The following day I found a looted skep by the roadside, with a few bees still hovering round. Honey and comb was all gone, and the skep was most likely one of those taken from the apiary I had seen the day before; it was of wicker work, covered with mud and cow dung, and I made a rough sketch of it at the time, a drawing from which I enclose herewith.

(*To be continued.*)

Lce.-Cpl. (now Sergt.) A. G. Atwell and a Veteran French Bee-keeper.



Sketch of Skep Looted by Germans, Aug. 13, 1914.

A DORSET YARN.

What a voracious monster is a big toad in the apiary? How many bees it would eat if left long enough to gorge its fill I

cannot tell, but it must be a very great many. Every one, large or small, I find near my hives I fling over the wall among the fruit trees. Still, they get in again, and when they see one coming they get benetth the hives. They do so much good to the horticulturist one must not kill them. I have seen them in the glass-houses clearing up many enemies to the crops that are grown in them. You may have legs to your hives, but I am not at all sure that they are always advantageous to bees, or that they make them secure from our friend Buffo; but having the alighting boards close to the ground is advantageous in spring. I have noticed that bright sunshine brought the bees out to work on the willow family, and if it quickly got cold many of them in flying back dropped to the ground, and could not get up to the alighting board and so perished, and that at a time when they could ill be spared. I have never made my hives with legs since.

In looking at a cottager's apiary this last summer, he had all his new hives set in lines on long planks, with several large bags over them, with here and there a brick to keep them from being blown away by the wind. I asked him if I should take him out a slab of honey. "Aye, do," he said, "we're main fond of honey." He called to his wife, "Bring out a platter, mother." I moved off the sacks, and two large toads hopped out from under them. "Lar, now, how'd they get thee'r?" said he, but there they were, and for what reason was easy to see, for the bees at night stayed in large clusters under the bags on each side of the entrance. It was either too hot, or there was no room for so many of them in the hive, and master Buffo had crept in under the back and was ready for his meal of bees; no wonder he looked fat and well.

Oct. 14th. I noticed that the bees are bringing home pollen of all shades of yellow and orange, the pale yellow, I guess, comes from a field of turnips with plenty of charlock growing among them—no men to hoe them, nearly 100 men gone to the war from one village. How beautiful the charlock looks. I have seen immense fields of corn in early summer wholly covered with this pretty member of the cruciter family in that neighbourhood (between Wimborne and Cranborne). Bees always did so well, but now the cottagers say "Our bees be all dead." The fields of roots this year have plenty of flowers, the wild yellow chrysanthemum and the scentless daisy.—J. J. KETTLE.

FIGHT FOR A NUCLEUS.

I want to get up a stock of bees in a diseased neighbourhood. That seems to bar me from introducing new stock till the disease has been worn down, and so I must take care of every queen I can. Rather small nuclei must be given their chance of coming though the winter, when, with the proper encouragement, April and May can do wonders with them. Alexander tells us how to bring up a stock of no more than a cupful of bees, spring count. I have not tried the plan myself, but I know a bee-prince who makes a success of it every year, and who winters a great many nuclei.

I have two very small lots of bees that three or four weeks ago were entirely overwhelmed by robbers. One lot was in a full hive. The robbers roared out like bluebottles when I opened it. I took three well-stored combs, on two of which were tiny patches of brood, and put these in a nucleus box, having a small square of perforated zinc in the bottom; so I could entirely close the entrance and still leave the bees plenty of air. I closed the entrance by pushing in a Porter escape, into which a good many robbers went, without hope of return. After about a week the escape was removed, and the robbers, having been naturalised, brought in lots of honey and pollen.

To prevent other robbers becoming a nuisance, I have given this stock a peculiar entrance which I will describe. A piece of perforated zinc about four inches by four is snipped, and three edges are turned down three-quarters of an inch so as to make a tray, with one side missing. This stands upside down on the alighting board, with the open end covering the entrance. Then you can turn up a corner of one of the walls to admit and emit bees just one at a time. It takes a very diligent robber about half-an-hour to find the entrance, and then the porch is packed with guards waiting for her. They do their fanning within the zinc, and are not tempted out by feinting demonstrations on the part of the robbers. Only those beastly wasps know the entrance just as well as the bees, and, thank goodness, the day of the wasp is nearly ended.

The other nucleus was almost equally overwhelmed, when I tacked a piece of zinc over the entrance, shutting in some robbers and shutting out the others. I did not know it, but one end of the zinc gaped, so that a bee was just able to squeeze in or out. I have now made the zinc gape that much at each end, it is a great delight to see the foragers taking in large bags of pollen, while the robbers have abandoned the little stock as a bad job. These two little lots that many would have given up for lost are now working as vigorously as most full stocks at this time of the year. In fact, a full stock with an entrance of six or seven

inches has to keep nearly all the population at home as a guard. As soon as you contract the entrance to a bee-space or so the hive gets quite busy. But you cannot do this without discomfort to the bees, unless you have a patch of perforated zinc in the floor-board.—G. G. DESMOND, Sheepscombe, Stroud, Glos.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

SALT AND "ISLE OF WIGHT" DISEASE.

[9195]—I trust that the following observations may be of use to bee-keepers and others. I may explain that I have kept or watched bees and been familiar with bee-keepers for about forty-five years.

As to bee plague, or Microsporidiosis (*Nosema apis*), it struck me when the plague broke out that the symptoms somewhat resembled those of human cholera. I was aware, from experience in India of the latter disease, that the only effective remedy yet found has been salt and water injections, and it struck me that the bees might be benefited by giving them salt. I watered four square yards of ground in front of each hive with a strong solution of salt in water, and also put some solution in a trough near their hives, that they might drink of it if they felt inclined. As they would not drink of the salt water, and my near neighbours' bees were being destroyed by plague, I threw half a handful of dry kitchen salt in front of the door of each hive, and found the bees sucked it away eagerly; and their condition, I could see by their briskness and look of health, greatly benefited. I also used this remedy for my neighbours' sickly stocks, with the same result. I believe that wasps do not suffer much, if at all, from *Nosema*, because they are omnivorous, and obtain the salt needed for their health from the flesh they eat; whereas bees are purely vegetarians. I naturally communicated my discovery to the chief agricultural authority, and received the following reply: "The suggestion that salt water should be given to bees liable to attack from *Nosema apis* was made some years ago by Dr. Zander, who first studied the disease in Germany and published a book on the subject. It is, however, not considered of sufficient power to prevent attacks under all circumstances, and it cannot be depended on," and the authority took no action on my suggestion. Now, in the first place, I did *not recommend* that salt water should be given to bees, but pure salt. In the next place, no medicine that I ever heard of can be depended on to prevent attacks of a disease under *all* circumstances. Is that any reason why a good remedy should not be used at all? The proof of the pudding is in the eating. Salt-eating bees have been saved, to my knowledge, when those without salt all about me have perished. I hope, therefore, that bee-keepers will try this remedy, and save some of their surviving stocks. So far as I know no treatment for *Nosema* has yet been suggested in this country.

The next important observation I have to make is this. There are two classes of bee-keepers. Those in one class either do not handle their bees at all, or protect themselves with gloves, gaiters, and veils against the stings of their bees. The second class handle their bees freely, with little or no protection, and get stung so frequently that they become immune: that is, they feel the stings hardly at all, and the poison does not make their flesh swell. We may call these immunes. Now I have noticed that no immune person has ever suffered from cancer, consumption, neuritis, or any form of zymotic disease. I have made many inquiries, and have never been able to find a single case of an immune so suffering. Bee poison consists chiefly of formic acid, one of the strongest antiseptics known, with slight traces of malic and other acids. The natural inference is that the formic acid purifies the blood from noxious germs. Consequently the immunes do not suffer from zymotic diseases; and their blood being healthy their organs remain healthy, and they die only by the natural decay of old age or by accident. (I am quite well aware that bee poison will not cure rheumatism, but I think that, their vital organs being in a healthy state, immunes are less liable to rheumatism than the non-immunes.) The suggestion and inference is that zymotic diseases could be cured or warded off by injections of an antiseptic on the basis of bee poison. On my referring the above said authority to this point, the reply I received was as follows: "I am to point out that the tendency of modern medicine is to seek out the cause of the disease, and to deal with the organ affected rather than the whole body, as such treatment may be attended with dangerous results to other organs." In other words (the authority's grammar is somewhat dubious), modern medicine will not inquire into facts which

show a treatment may make a whole body healthy, including its part, but only how to make the part healthy: for fear that the parts other than the unhealthy part may become unhealthy, such fear being contradicted by the facts. All I can say is that a science which prefers its tendency and its fears to facts is not properly a science but a foolishness, and in the end facts will beat it. When I put my views before an old village doctor, and asked him what was the reason in his opinion why scientific medical authorities would not consider facts contradicting their own theories, he replied, meditatively, "I remember a man being asked to write something original in verse for a lady's album, and he wrote as follows:

"You ask me for something original:
I don't know how to begin.
I have only one thing that's original,
And that is 'original sin.'"

I said, "You have not answered my question at all."

He replied, "I have given you the only answer."

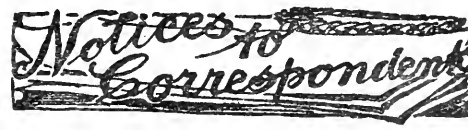
—A. E. Staley.

PRESS CUTTING.

HONEY HARVEST IN MID-ATHOLL AND STRATHTAY.

SPREAD OF "ISLE OF WIGHT" DISEASE.

The honey harvest in Mid-Atholl and Strathtay is now practically finished, and has proved one of the worst experienced in these districts for several years. In early spring stock hives unaffected by disease were found to be strong and vigorous, and hopes were then entertained that, with favourable weather, good results would be obtained. During the month of June hot weather prevailed, and prolific swarming took place where artificial means were not resorted to for its prevention. This seriously affected the return of surplus honey to the bee-keeper. At the beginning of July the bees had settled down to work, when, unfortunately, the weather broke. During the whole of the honey period one of the worst features of the season was the unusual frequency of thunderstorms, which were accompanied by torrential rain. An hour or two of bright sunshine sent the bees far afield, when they were overtaken by these sudden rainstorms, and either drowned or succumbed to the cold, and from this cause alone colonies were seriously depleted. The heather honey harvest proved a failure, practically no heather honey having been secured in consequence of the cold, boisterous weather which prevailed throughout the whole heather period, the bees only being able to secure enough for their own maintenance. A few apiarians have secured moderate quantities of surplus honey from clover, and a great number have got practically no return, and even anticipate having to resort to artificial feeding. In consequence of the scarcity of honey prices rule much higher than last year, as much as 1s. 6d. per lb. being secured, as against 1s. to 1s. 2d. per lb. last year. A regrettable feature of bee-keeping in Atholl which is causing grave anxiety to apiarians is the ravages made by the "Isle of Wight" disease, which is rapidly spreading. Many apiaries are now wiped out, entailing serious monetary loss, as all appliances have to be destroyed. During the year a branch of the Perthshire Bee-keepers' Association was formed in Mid-Atholl to co-operate with other branches throughout Scotland in securing legislation for the protection of bee-keepers. It has been ascertained that during the last year in Perthshire alone about 700 hives have been lost through disease, involving a loss of nearly £2,000.—From the *Scotsman*.



Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

"Veracity" (Co. Wexford).—*Storing Shallow Combs.*—When cleaned out by the bees after extracting, store them (*a*) in a box that is moth-proof; (*b*) clean the boxes in which they were placed on the hives, put the combs in them, and stack one on the top of another, taking care that they are moth-proof. You may wrap each box in newspaper. Store in a dry place. A ball of Naphthaline should be placed in each box. Those that are pollen-clogged may be soaked in water for several days until the pollen is soft, it may then be washed out by means of a garden syringe; or cut the comb out of the frame and melt it down and put a new sheet of foundation in its place. (2) Yes. We cannot say; it is not simply one machine or operation, but a process. (3) Light honey from clover and sainfoin, dark honey from heather and fruit blossom. It would probably rank with English honey if well handled. (4) It depends

on quality, the average is about 1s. per lb. for each.

"FUMIGATOR" (Worcester).—*Fumigating Combs.*—At least 48 hours; put in a fresh lot each time the "chamber" is opened.

B. W. J. (Grantham).—(1) Boil them at least 20 minutes. (2) Probably it will, but it is safer to use new ones. (3) Yes. (4) Either "flowers of sulphur" or "rock" sulphur.

J. H. ALLEN (Miss) (Shepton Mallet).—The insects are queen wasps; they are very numerous this year.

C. D. (Chippenham).—(1) Swiss. (2) 1851.

"SOMERSET."—You omitted to send name and address. See head of this column.

Suspected Disease.

F. C. W. (Cambs.).—The trouble is "Isle of Wight" disease. We should be very pleased to have your notes.

E. M. REYNOLDS (Hants.).—It is "Isle of Wight" disease. As you are so isolated we think you might venture to try again next season. Thoroughly disinfect the hives and lime the ground round where they stood. Place the hives in a new location if possible.

HONEY IMPORTS.

The value of honey imported into the United Kingdom during the month of September was £9,936. From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office of H.M. Customs.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

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PRIVATE ADVERTISEMENTS.

SECTIONS for sale. Sixteen dozen well filled clean sections, 12s. per dozen.—HOBBS, Camlot Cottages, Barnet. v 56

HONEY WANTED.—Genuine Scotch heather honey, in sections or run, in 6lb. to 9lb. glass jars, about 12 to 20lbs., possibly more; finest quality, and careful packing; state prices each.—"H.," c/o "B.B.J.," 23, Bedford-street, Strand, W.C. v 58

BEES FOR SALE.—Eight strong, healthy stocks, standard hives, each stock on ten new frames, 1915 queens, section racks, extractor, queen excluders, super clearers, £12.—HOBBS, Camlot, Barnet. v 57

EXTRACTED honey, 1lb. screw cap jars, 9s. per dozen.—ROPER, Thorpe-on-the-Hill, Lincoln. v 59

4 28lb. tins candied honey, 15s. each, f.o.r.; sample lb., 1s., post free.—HULL, Cowsley-gardens, Notts-road, Derby. v 55

HONEY EXTRACTOR WANTED, good machine, free from rust; particulars, price.—"EXTRACTOR," "B.B.J." Office, 23, Bedford-street, Strand, W.C. v 54

WANTED, 56lb. and 112lb. honey ripeners, with strainer, in good condition, cheap for cash.—Price, including carriage, to MOSS, 54, London-road, Hinckley. v 52

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, honey in bulk.—Sample and price to W. H. WYATT, Bishopswood, Chard. v 50

BEES for sale, 3 strong, healthy stocks, Standard hives, each stock on ten frames, 25s. each.—J. PAVITT, Earlswood, Rectory-road, Little Thurrock, Essex. v 48

2 CWT. fine English honey, 65/- per cwt., in 28lb. tins, samples 3d.—PENTNEY, Bramfield, Halesworth. v 47

WANTED, good lantern slides on poultry-keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, for dissecting purposes, old, worn-out, or otherwise useless queens, alive.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

EXTRACTOR, two frame, almost new, 20s.; a quantity of bottle feeders, with stages, 1s. each; tin separators, 6d. dozen.—ADVERTISER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print below a further list of names to those sent in. We shall be pleased to have other names as soon as possible.

Sergt. A. G. Atwell, Oaklands, Hillfield Road, Cove, Farnborough, Hants.—1st S. Wales Borderers. The author of the articles "With the Bees at the Front."

Cpl. H. W. Round, Catford.—R.E.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. Herrod-Hempsall,
Secretary.

In response to the above appeal, which first appeared in the British Bee Journal last Thursday, a soldier brought in the first donation at noon the same day. If all the readers of the British Bee Journal and Record respond as quickly and as well—for Cpl. Round brought half of what he had left—the hospital will receive a substantial weight of honey.

Cpl. H. W. Round, R.E., 2lbs.

REMITTANCES.

Since the new postal regulations came into force the bulk of small remittances have been sent in stamps. We do not object to this for sums up to 2s., but when stamps are sent, please send *half-penny ones*. We can always use two half-penny stamps when a penny stamp is required, but we cannot split a penny stamp into two half-penny ones.

EXTRACTS AND COMMENTS.

By D. M. Macdonald, Banff.

Live Bee Demonstrations.—The sensationalism so common on the other side is not much practised in this country. Yet there is quite enough of foolhardy demonstrations at times. Extreme measures can serve no good purpose, and generally the average person makes a bungle of it, thus doing more harm than good. Mr. Root advises that in exhibitions only gentle bees should be used, that the same bees should not be used more than once, and that stripping should not be indulged in. In handling bees he first shakes them into a tin dishpan, rolls them over a couple of times, and then with very deliberate movements he raises them in handfuls, being very careful not to pinch even a single bee. On one occasion he used another man's hat—an old one at that, greasy and sweaty. The bees showed their aversion by boiling up and making things lively. Since he has always used his own hat.

Temper in Bees.—A. I. R. writes that he has always noticed that the temper of bees is largely dependent on locality, and environment as well as on weather conditions. "Bees in an open yard, without shade or shrubbery, are apt to be crosser, almost invariably, than the same bees or the same strain located in a grove or orchard, where one hive is

screened from another. If the operator strikes a cross colony, the bees offering attack soon lose track of him when he is screened out of sight of their hives." His own original apiary, long familiar to readers of the "A. B. C.," was arranged on the hexagonal plan, with a grape vine grown on a small trellis for each hive. These vines during summer afford shade and shelter, but having shed their leaves before the approach of winter, the warm rays of the sun will be available when most needed. The well-known apiary of W.B.C. was in an orchard in a London suburb, and the now better known "W.B.C." apiary at Luton is also in an orchard of fresh young trees.

Transferring Bees.—Here is how Mr. Chadwick, California, does with bees bought cheap in all kinds of odd-sized hives and frames. "Twenty dollars were paid for twenty-three of this conglomeration. The bees were smoked and jarred out on to a set of frames in a new hive. As soon as the queen was down, an excluder was placed over the hive, and the box placed above. In three weeks the brood had all hatched out, and the boxes were removed, making a complete transfer without the loss of any time in the operation."

Myths.—The same writer controverts some curious contentions of Mr. A. C. Millar. He does not credit and never discovered a tittle of evidence in favour of the latter's assertion that when a bee returns from the field it does not rush for a cell in which to store its nectar, but, on the contrary, spends a seemingly needless amount of time wandering about inspecting cells. The other quotation is even more fabulous, "When a bee has emptied her sac she backs out of the cell, wipes her face, antennæ, and tongue, stretches and plumes herself, and, likely as not, crawls into some cell or hangs in some quiet corner for a nap. Thus she may stay for a few minutes, or for half a day." Great is the power of imagination when the man allows it to run riot!

Yellows.—Three authorities condemn these in a recent issue of *Gleanings*. Dr. Miller says: "A queen, perhaps the best layer I have, is marked for decapitation because her bees don't deliver the goods. The measure of a queen's value is not the number of eggs she lays, but the pounds of honey her workers store." Mr. Root adds his opinion: "We have had instances showing that the extra-yellow bees are not the ones that gather honey," and he adds that Mr. Vernon Burt, a neighbour, tells him that "while they are beautiful to look at, they are absolutely worthless for honey gathering." Mr. Ellis some years ago wrote me enthusiastically in praise of his yellows early in the season; they bred magnificently. I asked him to report at the end of the season, which he did, pithily describing them as "doolittle bees."

New Zealand.—They have now a "Bee-Keepers' Journal," which has attained its first anniversary recently. It has been established on a satisfactory basis, and has fully justified its existence. Several experienced apiarists have promised assistance in contributing articles. On account of the war we are informed Mr. Hopkins's departure for this country has been "delayed indefinitely." He was at last conference presented with a travelling rug, and Mrs. Hopkins with a trinket. Much kindly feeling was evinced towards this "grand old man" of New Zealand bee-keeping. The Honey Producers' Association have contracted to send us "not less than 100 tons, and not more than 500 tons of first quality honey at a satisfactory price, the contract to last for three years." There was "plenty of enthusiasm" at the Conference, in spite of the fact that the season has been "the worst on record." A representative of the Ministry attended, and congratulated the Association on the fact that the industry was progressing on satisfactory lines, and he promised careful consideration of any requests or suggestions which might be offered. The Government over there bestows its blessing on apiculture. A point worthy of consideration in regard to the quality of their honey is that they recommended "that in order to comply with the provisions of the pure food act, the water content should be reduced from 26 to 20 per cent. A number of samples of New Zealand honey had been analysed, and were found to vary from 14 to 17 per cent." Their Apiary Act dealing with disease is working smoothly. Inspectors have the right to enter any place where bees are kept. The "box" man is being suppressed, to the great benefit of up-to-date bee-keeping. They have four inspectors permanently employed, and their visits are welcomed all over the islands.

A DORSET YARN.

The time has now come to plant bush fruits, to provide early forage for bees. As I stated in "A Dorset Yarn" some weeks since, bush fruits are much sought after by the bees. Those bee-keepers who are not fruit-growers as well, might to advantage plant a few quarters with gooseberries. Plants are cheap, and they quickly grow into good fruiting bushes. If the planter has a few pounds in cash to spare he might get good rooted stuff from 12s. to 20s. per 100 which would bloom and

fruit the first year, but if he starts in a small way (as our firm did) he might plant cuttings, which can be thinned out of old bushes, and soon get a goodly number of plants, the most essential point in planting cuttings is to tread them very firmly with the heel of your boots. If you are setting out fruit quarters for profit, plant the cuttings where they are to remain, as the labour of replanting a few thousand plants is a big thing. Ten years ago we planted a quarter acre with cuttings. They soon grew, and the fruit has been continuous ever since; the second year these plants give you quite a lot of blossoms. The fruit that follows are a fine sample. All fruit-growers know that the largest fruits of gooseberries are from young plants. The third and fourth year you get thousands of blossoms. It is then you get the glad hum of "sweet content," because there is plenty of food. Fresh blossoms keep opening day by day. By a wonderful provision of nature, as each flower opens a small leaf unrolls to shelter it from the rain and frost. Do not be discouraged if soil is poor; work it deeply so that the roots can ramble away. As the years go on the soil will get richer the more it is moved. Three years since we planted another two acres of cuttings; this year they bloomed and fruited well. I gathered the crop early (they made 6d., 7d. and 8d. per lb.). Since then the plants have grown with great luxuriance, and look fine for the bees next year. I shall bring some of the stocks down into this small field to be close to the flowers.

The gentleman who wants to go in for bees and fruit speaks of Hereford and Worcester—two fine counties for all kinds of fruit. The old monks always chose the best places for their monasteries; wonderful old gardeners were they. They chose the Vale of Evesham because it was rich with potash salts, a great factor in the growth of all kinds of fruits. But, in my opinion, most soils will grow fruit, especially bush fruits. Dorset is famed for its butter. This county is like the land written of in an old book, "flowing with milk and (in some places) honey."—J. J. KETTLE.

WHERE THE ORCHARD PAYS.

AN APIARY ON THE FARM.

LADY BEE-KEEPERS IN WAR-TIME.

I am sending a photograph of two lady pupils who, with others, have been spending the summer on a farm in this neighbourhood, and who have added bee-keeping to their other out-of-door accomplishments.

There seems to be something attractive, and indeed exhilarating, in life in the open air to those who have usually dwelt in our large centres of population. No one who has the least fondness for things

rural can ever tire of the delicious freedom afforded by an outdoor life.

The freshness of the country-side, the varied beauties of Nature, the flowers, the bees, and the inhabitants of the farmyard exert a lasting charm. The invigorating air and the sunshine beget a keen appetite and a face bronzed and brown.

There is fascination to be found in the work and changefulness of the country—the sequence of sounds that the hours bring in regular cycles. The hum of insect life, the faint rustle of the trees and movements of the cattle lend interest to each passing hour; whilst at night the air, though so still, reverberates with sounds like the rasping of crickets, the musical cry of the game-birds, and the hoots of the owls.

On this farm most of the work was done by women, many of whom were quite new to the operations connected with dairying, feeding live stock, poultry management, haymaking, fruit gathering, and bee-culture. In this they took the place of men, and very businesslike they looked in brown smocks and sunbonnets pitching hay or loading wagons.

A small corner of an orchard was devoted to the bees, and after a hot day in the fields it would be pleasant to adjourn to the orchard, and there spend the long evening in apiary management.

Nothing awakens interest in the beginner like the first view of a hive interior; to be able to watch the seething mass of restless workers clinging to their combs, to see the pure white ring of sealed honey above the circles of hatching brood, or the pollen carriers trudging along the frames. And these young ladies were soon adept at opening hives, finding the queen, cutting out cells in the swarming season, adding fresh supers, forming nuclei, and so on.

The natural fear of stings quickly passed, and by the protection of a bee-veil and gauntlets confidence was soon gained.

Though no one can hope to keep bees without being occasionally stung, a quiet strain of workers carefully handled does much to avoid those fierce outbursts of which we sometimes hear, and incidentally gives to bee-culture that special charm which is its due.

The hum of the bees in this orchard apiary is no longer heard by the subjects of my sketch, but I have no doubt they will look back with pleasure to the happy hours spent in that rural spot under the shadow of the hills, and to the opportunity it afforded of knowing something about the mysteries and management of the honey-bee whilst there.—A. H. B., Cheltenham.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

ATTACKING "ISLE OF WIGHT" DISEASE.

[9196] I think it is nice to see the increased interest that is being taken in the attempts to combat this disease; also, although losses are still great in some districts, we do not seem to be quite so pessimistic as to its ultimate defeat. Is it not possible to work up during the winter a united effort of experienced bee-keepers to visit and find out diseased colonies, and persuade the owners to destroy or help with advice, as the case may be? Concerted action during February, March, and what other time could be spared might do a lot to weed out this complaint. Of course, some of us must expect to meet with, not exactly nice receptions sometimes; but surely it is time we made some sacrifice in this direction, and we should know that at least we were doing what, at present, we could. Perhaps some individuals or association could spare a little for disinfectants. I think Izal is as convenient as any and would answer very well, as this can be added to syrup, and the bees will take it. There is no doubt, provided the season is sufficiently advanced, that syrup thus treated, with a good washing of hive interiors with the same disinfectant, thus causing "accelerated breathing," does seem to afford relief, provided there are enough bees to warrant the trial. Two or three tablets of apicure and naphthaline put in the hive will also help.

Yellow Thieves (page 378).—I should like to endorse all that is outlined in the letter. So far as I am concerned, I have found them exceptionally handy, working in the morning when the native black were apparently asleep. I have compared then closely for three years, not on a large scale, but, as stated last year, I have lost about forty colonies of brown and blacks while I have had this strain. I have since imported one Italian queen direct, and have raised from her progeny thirteen colonies at home, and sold two, which have increased in one case to three, and in the other to about seven, and sold three swarms this year. I have

not been able to see them since August, and not one of them has shown symptoms of disease yet. The imported queen swarmed late after a good few sections had been taken and a division of frames made. In about ten days the combs were built out, packed with brood, and were a pleasure to see. Of course the seasons lately have favoured these early takes and late swarming. As regards robbing, they are inclined to that; but if one's season ends early, no trouble should be caused with proper management. I nearly had some trouble. I cleaned some sections in the open, and soon had to take cover; but the bees seemed to be very friendly among themselves. A carbolic cloth soon put matters to right. I only had the evening to do this job. I could have placed them in one of the hives, but wanted to know that they were packed away all right. I generally find Italians easy to handle, especially in spring, with little or no propolis, but inclined to brace at the top of combs; this may be attributable to extra space here. I shall plump for the "Goldens."—A. H. Hamshar.

ECHOES FROM THE HIVES.

BAD HONEY HARVEST FOR THE NORTHUMBERLAND BEE-KEEPERS.

The heather has done very little for the above bee-keepers this year. In ordinary times we generally take the bees to the moors by the first week in August, and bring them home in the second week in September or thereabouts. Most of the bee-keepers took their bees away this year at the usual time. Others, who had cycled to the moors, thought it advisable not to go until the end of the second week in August. However, be that as it may, whether it was the first or second week, the heather was late by a couple of weeks; then, of course, it finished very late. We sometimes see commotions at the hives or about the hives in ordinary times. Of all the commotions there was none to equal that of the bee masters after their bees had been to the moors for a fortnight. Men without the proper understanding made their minds up that some moors were literally rife with the "Isle of Wight" disease. So persuasive were they to those who had not gone with their bees to the moors that the latter declined to go. So far, since the season has finished, I have not heard of a single case of infection; there may be some of which I have not heard. To my mind, as an ordinary bee-keeper of thirty years' standing, the great evils at the moors were the wasps and the shortage of honey. Many bee-keepers, as I have said, persisted in saying the deadly disease was rife. When I arrived to bring my lot of bees away, by a careful inspection, I saw the cause of the bees being worried out. Wasps were going in and out in dozens. As far as I could learn the wasps killed the queen, then the stronger stocks of bees near seized upon the honey and cleared off the lot. I enquired from the shepherd the reason of so many wasps. He said that he could not account for it, but of all the years he had shepherded the moors he never had seen such a quantity. Let the cause stand as it is, we should be happy to say that we have not the "Isle of Wight" disease round about Ashington. I don't know of a case of that diease. Moreover, had it been present it would have shown itself before the heather season. The clover honey season was quite a success, the very reverse of the heather. —John Wilkinson.

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REARING QUEENS IN NUCLEI.

[9040] I should be very grateful if you could give me a few brief instructions in the British Bee Journal as to how the bee-keeper whom you mention in the first part of "Queen Rearing" in "Helpful Hints," raised his queens in nucleus hives placed in front of stocks, as I should like to rear mine the same way next season.—T. O. Downs.

Reply.—In paragraph 5 on page 140 it is plainly stated that the nucleus is placed in front of the stocks a little to one side to be out of the flight of the bees, and filled from the stock. A brief description of how to make a cheap nucleus hive was given on page 371. In order to get queens from the mother selected, follow the instructions given in the Guide Book on pages 125 and 126. Place a frame of clean worker comb in the centre of her brood nest, which she will fill with eggs. Three days afterwards the queen and all comb containing unsealed larvæ may be removed. The bees will now commence queen cells on the new comb, and when ready one of these is inserted in each nucleus, first cutting out any queen cells the bees may have started in them.

Notices to Correspondents

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H. C. YOUNG (Alton).—We are in receipt of the photograph, which is exceedingly good, and for which we are greatly obliged.

"SOMERSET" (Bath).—The comb is rather rough and misshapen, the attachment to the top bar is not good, and it is somewhat pollen-clogged. Beyond that there is nothing wrong with it.

Honey Samples.

J. M. BEST (St. Austell).—The sample is from clover, and is good in all points. The density is very good. The one weakness—from a show bench point of view—is the colour; it would have been better a little lighter.

X. Y. Z. (Notts.).—No. 1 is mainly from clover and a little from mixed sources. It is quite suitable for show purposes. No. 2 is from clover. There are signs of fermentation in it.

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PRIVATE ADVERTISEMENTS.

WANTED, "Bees and Bee-Keeping," Vol. 2 (Cheshire), or "A.B.C." of "Bee Culture" (Root).—INGLEBY, Little Clacton, Essex. v 61

APIARY for sale, 24 colonies to winter: 8 May swarms and early swarms, in 14 box-frame hives, containing about 130 brood frames built out complete, 7 skeps, hives, and 3 temporary boxes. Not fed up for winter. Owner 85 years, past all work and correspondence. Would accept £10 10s. if removed and cleared from premises by buyer, includingt all belonging to apiary. About 130 built-out brood comb frames, in hives, also about 32 section racks ready to go on, sections in flat 9 empty box-frames, 5 skeps, empty, may stand the winter.—J. G. K., Grove House Apiary, 7, Victoria-road, Tunbridge Wells. v 63

WANTED, "Little Wonder" extractor, must be in good condition.—STRATTON, Overton, Marlborough. v 62

WANTED, 56lb. and 112lb. honey ripeners, with strainer, in good condition, cheap for cash.—Price, including carriage, to MOSS, 54, London-road, Hinckley. v 52

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

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BEES for sale, 3 strong, healthy stocks, Standard hives, each stock on ten frames, 25s. each.—J. PAVITT, Earlswood, Rectory-road, Little Thurrock, Essex. v 48

WANTED, good lantern slides on poultry-keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, for dissecting purposes, old, worn-out, or otherwise useless queens, alive.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

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EXTRACTOR, two frame, almost new, 20s.; a quantity of bottle feeders, with stages, 1s. each; tin separators, 6d. dozen.—ADVERTISER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, a good photograph of pressing heather honey, or anything else in connection with the heather harvest.—SCOTSMAN, c/o "B.B.J." Office, 23, Bedford-street, Strand, W.C.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print below a further list of names to those sent in. We shall be pleased to have other names as soon as possible.

Capt. C. B. Greenhill, Dunball, near Bridgwater—West Somerset Yeomanry.

Lieut. E. A. Green, Oakhill, Shepton Mallet—North Somerset Yeomanry. (Wounded).

Sergt. N. J. Reynolds, Huntspill, near Highbridge—8th Somerset Light Infantry.

Corpl. R. J. C. Ferguson, Bishop's Lydeard—8th Somerset Light Infantry.

Pte. E. Westcott, Porlock, Somerset—1st R.N.D.H., Mediterranean E.F.

The above are members of the Somerset B.K.A. The last three were the local Hon. Secs. and Visiting Experts to their respective districts.

Lce.-Cpl. Jas. S. Leigh, Saddle Inn, Marton, Blackpool.—R.A.M.C.

In our "Roll" for Sept. 30th Pte. L. Kettle should be Sapper L. Kettle.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. Herrod-Hempsall,
Secretary.

Amount already received ...	2 lbs.
Mr. C. L. M. Eales	56 lbs.
Mrs. E. A. Birch	12 sections
	70 lbs.

REMITTANCES.

Since the new postal regulations came into force the bulk of small remittances have been sent in stamps. We do not object to this for sums up to 2s., but when stamps are sent, please send *half-penny ones*. We can always use two half-penny stamps when a penny stamp is required, but we cannot split a penny stamp into two half-penny ones.

May we also remind correspondents that the postage on letters is now one penny for *one* ounce instead of *four* ounces. Care should be taken that postage is fully paid, or the letters may be refused.

OBITUARY.

JEAN HENRI FABRE.

It is with deep regret that we have to record the death of this famous naturalist at the advanced age of 92 years.

Jean Henri Fabre was born at Saint Léons, in the canton of Vezins, in 1823. He was of quite humble origin, his parents being worthy but poor peasants. Educated at the village school, he early showed his enthusiasm for insects and plants, which he used to collect. This embryo entomologist, who was destined to become famous as a naturalist, did not confine himself to these two subjects, but studied rocks and other objects of nature, and, paradoxical as it may appear, was equally enthusiastic over physics and mathematics. Owing to the small means of the family, his desire to become a doctor could not be gratified, so he had to content himself with becoming a school teacher at Carpentras. His salary was a modest 700 francs (£28) a year, but in this way he was enabled to continue his education. He married at twenty-one, and had already to support a home and family when he, in 1854, finally selected entomology as his vocation. A naturalist's vocation is not usually a remunerative one, for dependence on it for a living is very precarious, and in the case of Fabre the world hardly knows that his life had been one of continual struggle to carry on the work to which he was so passion-

ately devoted, in the face of oppressing poverty.

Amongst entomologists Fabre was well known, for as far back as 1859 he had produced studies which caused Darwin, in his book on "The Origin of Species" (page 69), to allude to him as an inimitable observer." He quotes him as an authority several times, although Fabre was not in agreement with Darwin's predominant theory of natural selection. Later Fabre became assistant professor at the Lycée, at Avignon, and eked out his poor salary by giving private lessons. Ill-fortune seemed to pursue him. It is said that he discovered a method of extracting profitably the pigment of madder, with great hopes of success, but he was robbed of the invention, and others reaped the benefit. Scientists and authors began to recognise his great ability, and although Pasteur and others consulted him, they could not take in the fact of his poverty. In one of our own countrymen, however, Fabre found a firm friend. John Stuart Mill, whose wife died at Avignon, visited him there and found consolation in Fabre's society, the two friends going out together collecting insects. Fabre was an advocate of the scientific education of women, which was not at all in accordance with the notions of the academic world, and as a consequence was ejected from his professorship and home at Avignon. At this juncture Mill proved a true friend, for he sent him £120, which relieved Fabre of his hardship. He found another friend in the French Minister of Education, M. Duruy, who introduced Fabre's books into the public schools, which was the means of giving him an income, and, in a measure, relieved him of his financial difficulties. He was now becoming well known outside the narrow circle of entomological science, and his books were extensively translated, and are now well known to English readers. When he emerged from his obscurity many years ago he was invested with the title of "The Insects' Homer," for rarely has an enthusiasm for exact science and literary skill been so happily united as in Fabre's case. Some of his descriptions read like fairy tales, and his great achievement was the revelation of intelligence in insects. Who has not read the chapters on "An Unknown Sense" and "The Theory of Instinct" without being enraptured with the description of the manner in which the fossor *Ammophila sabulosa* instinctively and infallibly discovers where the grub which she requires for her young is to be found, and when, in order to supply her larvæ with "fresh meat," this little creature, after she has captured the suitable prey, stings it in such a way that it becomes paralysed, but does not die? It is more like a romance, and yet here we have in this description that exact science, the result of years of patient observation. During his long watchings he saw strange and beautiful things, and sometimes even terrible ones, all of which he has recorded not only in a fascinating but precise style. He believed that instinct in insects was inborn and perfect from the first, as the mainspring of the mental equipment of the insect.

Among the principal works of Fabre are, of course, his own volumes of "Souvenirs Entomologiques," published between 1882 and 1907, which have gone through several editions and have been translated into various languages. Among other important works are "Mœurs et Parthénogenèse des Halictes," "Répartition des Sexes Chez les Hymenoptères," "Mœurs des Insectes," "La Vie des Insectes." In English, "The Life and Love of the Insect" and "Social Life in the Insect World" are most interesting works. Another book of special value to agriculturists is "Les Ravageurs," in which "Uncle Paul" describes in a pleasant manner the insects injurious to agriculture.

Fabre was happy in his domestic ties, and worldly prosperity had no attraction for him. It is said that at one time M. Duruy wished to make him tutor in the Imperial family of France, and he was summoned to Paris and presented to the Emperor, but he had no taste for Court life or anything that took him out of his simple living and hard working. By the death of J. H. Fabre the world is poorer, for it has lost a great naturalist and a literary artist of the first rank.

Naughty Beeswax (p. 246).—Mr. Smallwood's riddle of the changed temper of the Jersey bees admits of several solutions. The most likely one is that the bees had been disturbed prior to his visit. Or, the meteorological conditions may have been disturbant of their serenity! Or again, the bees may have resented the particular treatment to which they were subjected, or may have recognised Mr. Smallwood as a stranger by his Parisian accent. On the other hand, these bees may have been naturally bad tempered, but experience of Mr. Smallwood, and the intimacies of travel

with him, may have so tamed them that they imagined the millenium to have arrived, and as, filled with sweets and inoculated with the *serum* of peace, they could no longer get into their late wax, they no doubt proceeded to beat their swords of offence into spatulæ of their *cereus* art. But it is usually a more difficult job to pack bees for travel than to unpack them. The journey appears to have a subjugating effect.

Vaseline for Supers (p. 250).—To get the best results from this it should not be used too sparingly. The little extra will compensate for some absorption by the wood, and some will squeeze out and cover the joint just where the bees would pack in the propolis. I use vaseline freely, and especially between the ends of my close or self-spacing frames, upon wooden section dividers, and under the frame lugs. Not quite so freely as advised above, however, between the parts of the hive, as these have no plinths, and the slight attachment is of value for travel to and from the moor. These details refer to my shallow frame hives, which by preference are selected for the purpose of moor going. One other piece of apparatus which well repays similar attention is the super clearer. If this be well lubricated, the removal is greatly facilitated.

A Matter of Policy (p. 257).—It is a good policy to tie up the trouser bottoms when bees are cross, and it is a good tip to rub a strongly carbolised cloth over the exposed portion of the socks. Our sympathies must go out to D. Wilson whose calves were so badly stung, but surely this is a case for the B.B.K.A. animal insurance, the compensation from which would surely come in useful should the legs require restocking.

Sitting and Standing (p. 258).—The height of the operator should, of course, be taken into consideration, a point which I must confess I overlooked, being concerned alone, I am afraid, with my own height, which like that of the unknown contributor "X" is nearly six feet. I do not know D. M. M.'s height, but in this respect he has considerable advantage over us, although we regain it perhaps when dealing, alas too seldom, with skyscraper hives. Some consideration should be given to the length of time devoted to the work, and the extensive bee-keeper may well be left to look after himself. He may be depended upon to discover the short cuts and the easiest methods. The comparative test is the amount of the work accomplished, in the one case working in a sitting posture, and in the other standing, with occasional rests. Some bee-keepers might well find an advantage in the increased steadiness of the sitting position, and a useful combination seat and tool box has been designed for their use.

Skeps versus Frame Hives (p. 258).—I must say that I fail to appreciate Mr. Hamshar's difficulty with the account as stated. It is perfectly reasonable to consider all increase and surplus as gross profit. If the honey be taken instead from the increase it naturally swells the surplus. His own reckoning needs more detail before it can be fully understood. If, as stated, he increased one stock to five stocks, in addition to selling £1 15s. worth of bees, and 97 lbs. of surplus honey, he did remarkably well, so remarkably that I think he must have made a mistake, and I should be much obliged to him if he will give details of how all this was accomplished. As the account stands it would appear that at least six, if not seven, lots of bees were established from the one hive, which makes the take of surplus honey in addition almost incredible. But, as I say, there may be a misunderstanding.

BLURTS FROM A SCRATCHY PEN.

THE BUSINESS OF HONEY PRODUCTION.

Wandering through the pages of the BEE JOURNAL up to 1884-1885, I notice how many correspondents hammer away at the same idea—a market for honey. Pressure even seems to have been brought to bear on the Bee-keepers' Association to give their help, for a special committee was appointed for that purpose. Some even appear to have been more ambitious, for it is suggested in several quarters that, conjointly, a library and reading room should be provided. Thanks to many friends and donors the library is established now, and the museum also. For the reading room, that must, even after these years, "bide a wee." The culmination of the whole affair appears to have been the formation of the British Honey Company, 1884-5. A great help was given to the Company by the late Baroness Burdett-Coutts, who generously offered to permit some of the rooms and employees of the Columbia Market, Hackney Road, to be

used for a time without expense to the Association. (See BEE JOURNAL, July 15th, 1885.) One would have thought with a good set-off like this such a Company would almost have galloped to success. The reasons why it did not do so are many, and perhaps the history of the rise and fall of the British Honey Company is worthy of an article by itself, because it was an object-lesson on the difficulties of forming any Honey Association. To handle honey, also to weld together for the common benefit all the various self-interests, and, shall I say without fear of punishment, all the "cranks" of bee-keepers all over the Islands would require a man of very great organising power, such an one as we have not yet found; that is the man we are now looking for with, as Sam Weller would say, extra double microscopes. Who knows, perhaps these few jottings may drag from some obscure village the Lloyd George who would be so useful!

As I said in the commencement, these articles are written to obtain the views of bee-keepers as to how best, the sale of honey, and consequently the number of bee-keepers, may be increased. Therefore the question, if a "Honey Company" would be the best means to that end, is quite worthy of debate. This is the age of co-operation and combines, and the uniting of groups of interests. We see it in butter- and cheese-making. Is some such an arrangement workable in the honey trade? Of course there are always two sides to every question. Honey is so different from other produce, and it may be argued that even with the most careful packing smashes will occur, and often total losses, which will not encourage the bee-keeper to send again; whereas if he sells what he has got in his own neighbourhood he gets a better price and no damages. And possibly the reply would be the advice to think imperially. Say for the benefit of bee-keepers in general, would it not be better to arrange certain standards or grades of honey—a poor honey will prejudice a higher class honey? Would it not again in the interests of bee-keeping be well that honey should be better advertised?

Now that is just where we stand. We are waiting for someone to tell us what to do. Has no one got a bright idea?—J. SMALLWOOD.

A DORSET YARN.

Meeting one of the oldest experts on bees this week, the first query was, of course, "How are the bees?" His answer was, "I have one stock left out of 40." Yet in years gone by, at the Wimborne Flower Show, Mr. Chas. Monckton was always there with his bees, illustrating how industrious they were, and the proper system of managing them. His keen interest in all that pertains to their well-being started many a novice in the craft. Go into the cottage gardens, they will show a bar frame hive; it was given by Mr. Monckton, always ready to help them on the right track. He must feel his loss very much, but he will always have the consolation that he did not consider self in his study of bees. All he knew (which was considerable) he was always ready to tell others, and to tide them over the first few difficulties the novice is sure to have. He had a very wonderful control, even over some very spiteful stocks. A friend of mine had one stock (a stray swarm that settled in an empty hive) which was always spiteful, but these bees were wonderful workers. Mr. Monckton could manage them, but no one else could. The owner gave them away; he was afraid their bad temper might be catching, and spread to the other stocks.

How is it that bees are, with some people, always on the warpath, and with others quite tolerant? I remember an old garden, when I was garden boy, at Titness Park, in Berkshire. The bees were in the herb garden, about a quarter of an acre of ground. The paths were edged with camomile a foot wide, lines and lines of thyme (common and lemon), several sorts of sage, with marjoram, hyssop, and tarragon—everything our climate would produce for flavouring the food of the wealthy—a thick holly hedge on two sides of it to shut off the north and east winds; truly an ideal place for bees. They did not have to fly far for food, it was all around them, growing in great luxuriance. They could, in the words of the old book, "eat, drink, and be merry, for to-morrow we die." Yet here in this delightful garden the bees were only tolerant of some of the staff. Two of the men dare not go near them; but two old men, who had worked there from boyhood, could hoe through the herbs close up to the hives without getting stung. Sometimes the bees would settle on their arms as they used the hoes. That was the garden that first made me take an interest in bees. At that time (the early seventies) they had only skeps, with bell glasses on the top for surplus honey, glasses nearly as large as the skep itself, full to overflowing with the finest flavoured honey. Some of the most delightful memories of boyhood are of swarming time

there. Being the garden boy it was my duty to get the herbs that were wanted each day at the mansion; herbs for soups or for claret cup, mint for sauce, etc. Being with them each day one could see bees hanging outside the entrance. One soon knew when they would swarm, and when they did, what a song it was! Maeterlinck says 40 or 60 thousand go with a swarm, they all seem to sing their loudest then. Then from another hive would come out another 50 thousand. They had such good quarters they never (while I was there) flew away, as mine often do in Dorset. I have seen them hanging in huge clusters among the sage and lavender, where the old men could easily hive them; but when they clustered in the high pear trees the hiving had to be done by the garden boy, and boys never seem to know what fear means.

Some day I hope to have such a garden as that one was. Just now there is a greater demand for herbs and such like plants, the growing of which had been allowed to drift over to Germany. In future more will be grown in our own loved land.

On Wednesday last, at the Bournemouth Winter Gardens, I tried to do a little propagandist work for the craft. I was the "stump orator" for the evening. As an encore to "Shemus O'Brien," I gave the audience the "Songs of Bees." It was from memory, having read Maeterlinck's book, and given in that great hall, then filled with lovely flowers (it was the autumn flower show), from the applause I got I could not but think it was interesting.

I was also "stump orator" on Tuesday, the first day of the show.—J. J. KETTLE.

THE PENALTY FOR LOOTING BEE-HIVES.

The following interesting cutting from the *Observer* has been sent on to us by Lt.-Col. A. R. Liddell, A.S.C.:—

RUSSIA'S WINGED ALLIES.

PETROGRAD, Saturday.

Four Austrian soldiers and an officer, forming a patrol, found a deserted garden in which was a beehive. In trying to get the honey they upset the hive. Hundreds of insects set upon the marauders and stung them almost to death. A party of Russians, hearing screams of pain, made for the spot, and seizing the discarded rifles took the men prisoners.—Central News.

HOMES OF THE HONEY BEE.

APIARIES OF OUR READERS.

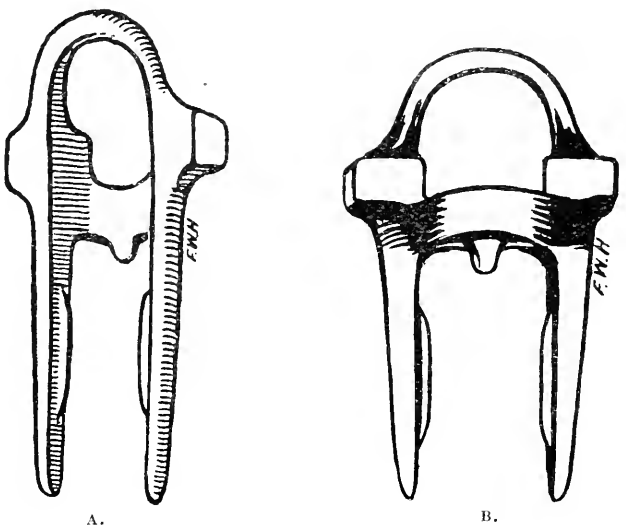
We have pleasure in giving an illustration of the apiary of Mr. G. Ward, Laurel Cottage, Langley Mills, Notts. We hope that Mr. Ward will meet with the success he evidently deserves, and that the rest of his bees will escape that fell scourge, "Isle of Wight" disease. Mr. F. W. Harper has very kindly made sketches of the old metal end, illustrations of which we also give. A is a top, and B a bottom view. We should be pleased to hear if any of our readers have seen similar ends. We give Mr. Ward's account of his bee-keeping experiences in his own words:—

It is five years ago last month that I received by post a "British Bee-Keepers' Guide Book," with the news that a hive of bees would follow on in a day or two. I can assure you I was anxious about it, as I had never had charge of live bees before, but I set to work with my book, which I read and re-read times without end. It has been a very real help to me. Well, the bees came one very warm day. In my mind I knew just what to do, but when I looked at them I must admit I felt a bit shy. They were pure Italians. The site was quite ready in the garden, so with my veil and smoker I felt fully armed, and in a few moments I had them set up, the wire taken off, the quilt on, and the bees let loose. This hive was sent to my master. I said if I looked after them I would like some of my own. So long as he had nothing to do with them he did not mind. A joiner friend made me a very nice hive, and I took it to a local bee-keeper, who put me a good stock into it for a pound. My grandparents used to keep bees when I was a lad. Of course, they have gone home long ago, but the old skeps and two very old frame hives were still at the old place, so I paid it a visit. Their state was indescribable, there were two inches of green moss on the top and old dirty rags and paper inside. I had to pull the grass up before I could see the entrance. However, I got my aunt to give me one of the old frame hives, for which I sent her a new hive. The combs and honey were one solid block. I had twenty miles to take it, but after I had made up the entrance I put a large horse rug and a strong rope round it, and I soon had it home. This was in the spring. My joiner friend made me another hive, and I put in eight bars of wired foundation. I lifted up the old hive and the bottom fell off; it just fitted on the top of my new hive. It was not long before the queen was down and filled four combs with brood. Then I took off the old box and put a new bottom on it and stood it six feet away. The old

queen was in the old quarters when I took the old part away, so I bought a new queen for the new hive. At the end of the season I drove the lot of them out of the old hive into a new one. I am still keeping the old box as a relic, and am sending you one of the metal ends taken out of it. Of course, now I can make a hive myself, and it is quite easy to increase. I have eight stocks at my place of work. I am sorry to say those I had at home have been cleared off by that awful "Isle of Wight" disease. It was only yesterday I found out that a man in the place had bought a skep of bees about the time mine showed signs of the disease, and they soon died. My other eight stocks are all right, and I packed them up to-day for the winter. I am more fond of them to-day than I was five years ago. I never mind a few stings: I think they do me good.

As I travel about the country a good

MR. G. WARD'S APIARY, LANGLEY MILLS.



A. B.

SKETCHES OF OLD METAL END SENT BY MR. G. WARD: (A) TOP, (B) BOTTOM.

deal I find many bee-kepers, some good, some who never ought to be allowed to see a bee hive. Some of my best friends are bee-keepers. I have no trouble to sell my honey—have sold out now, and am selling for my friends.—G. WARD.

SOUTH STAFFS AND DISTRICT BEE-KEEPERS' ASSOCIATION.

The above Association had a very pleasant and enjoyable meeting on Saturday, October 30th, at the Temperance Hall, Dudley, when about 24 members turned up. Mr. C. C. Thompson occupied the chair.

Mr. Price read some interesting correspondence which had passed between himself and the Board of Agriculture and Fisheries, on the possibility of a cure for the dreaded "Isle of Wight" disease, which was now making great ravages among bee-keepers' stocks.

He invited those present to give their views on the subject of the so-called cures, and many interesting points were discussed.

Mr. Rollins asserted that he had found a positive cure, but was not prepared to give his secret away. To prove its worth he invited any bee-keeper that had stocks with the disease to bring them to his apiary, and he would cure them. However, he remarked that they would probably not care to remove them home again for fear of reinfection.

He also thought that bees in skeps were not so liable to contract the disease, as he believed foundation was a fertile source for producing it.

In his opinion bee-keepers would have to return to the keeping of bees in skeps again. He believed it possible less disease would then exist, because bees would be allowed to build their own comb, and he considered that quite as much profit would be made with skeps as from expensive frame hives.

Mr. J. Cole vigorously criticised Mr. Rollins' suggestions, and wished to state plainly that when bee-keepers were compelled to again revert to skeps, then he was finished with bee-keeping.

As to cures, after considerable experience and expense, he was convinced that fire was the safest remedy at present. He hoped that if Mr. Rollins had found a reliable remedy he would give the members first chance to prove its worth, and was sure Mr. Rollins would benefit financially if it were a success.

Mr. A. E. Taylor also criticised Mr. Rollins' idea of keeping his treatment to himself, and begged of him to allow others to benefit by it.

Personally up to the present he had found Izal treatment was as good (as a preventive) as anything he had yet tried, but unfortunately this only appears to keep the disease in abeyance for a time. Still, he thought it worth trying. He therefore begged of Mr. Rollins to reveal his secret.

In responding, Mr. Rollins said that although he himself was quite convinced of the efficacy of his remedy, he was still anxious for his bees to get through the winter with it before placing it on the market.

The Hon. Secretary summed up the discussion, and thanked all those who had taken part therein, but he was still convinced that whether bees were kept in skeps, boxes, baskets, bad hives or good ones, they all were the same in respect to "Isle of Wight" disease. It was a disease of the adult bees, and not of bee-hives. As to germs being conveyed into foundation, he felt sure that when the foundation left the manufacturers it was sterile, but unfortunately many small dealers were not careful enough in storing it. Many times he had seen it exposed on the same bench as combs taken from hives having the disease; this was, of course, very dangerous. As to cures, he was still looking to the Board of Agriculture to give us one.

After refreshments and the inspection of many useful and interesting articles brought by members, including a collection of bee produce and honey of various colours and grades, a pleasant evening was brought to a close.—A. CHESHIRE, Assistant Secretary.

WEATHER REPORT.

WESTBOURNE, SUSSEX.

OCTOBER, 1915.

Rainfall, 4.45in.	Minimum on grass, 26, on 1st and 29th.
Above average, .33in.	Frosty night, 1.
Heaviest fall, 1.25, on 31st.	Mean maximum, 55.4.
Rain fell on 14 days.	Mean minimum, 42.3.
Sunshine, 67.2 hrs.	Mean temperature, 48.8.
Below average, 50.5 hrs.	Below average, .6.
Brightest day, 1st, 7.3 hrs.	Maximum barometer, 30.277, on 18th.
Sunless days, 6.	Minimum barometer, 29.319, on 31st.
Maximum temperature, 61, on 12th and 14th.	
Minimum temperature, 32, on 29th.	

L. B. BIRKETT.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

A LETTER FROM THE DARDANELLES.

Sept. 10th, 1915.

[9195] Being a regular reader of the BEE JOURNAL and RECORD I should be much obliged if the Editors would be so kind as to allow me a little space to let my many bee-keeping friends know how I am getting on. I should like to write to each one personally, but owing to the scarcity of writing paper cannot possibly do so. We left England on the ———, and landed on the ———. We went direct into action, but did not come into close contact with the enemy until the 12th August. We then attacked their position, and I am sorry to say we lost a lot of men. During this attack I got wounded in the head, but luckily it was only an outside cut, so after a day's rest I rejoined the regiment and have been at it ever since. We have now been here just on five weeks and have been continually shifting about. I have had some very narrow escapes, for wherever you go you meet with rifle or shell fire. The country is mountainous, consisting of gullies and ravines, and it is very hard to get about. It is very hot in the daytime, but equally cold at night, and the flies are a perfect nuisance. We live entirely in the ground, either in trenches or dug-outs, for there are no buildings about. As regards the bees of the country, as far as I can see they are very similar to ours, though the abdomen is sharply pointed. They are just about the same size as our natives, though lighter in colour, and have a patch of bronze just below the thorax. I have only seen a few flying about here, so have not had much chance to study them closely. I have, however, seen many very beautiful butterflies and moths which would delight the heart of entomologists. We also have seen all sorts of animals and insects. Tortoises, snakes, lizards, and frogs abound, and the ants are as big as our hive bees. In conclusion I may say at the time of writing (September 10th) I am quite well. When I get more time I will let you have some more information. If any of the readers of this paper do not keep the weekly or monthly issues of JOURNAL or RECORD perhaps they would be so kind as to post me a copy on now and again. It is weeks since I last saw the JOURNAL or RECORD, and one gets quite lost without them. Should any kind reader care to send me a copy I shall greatly appreciate their kindness. People in England little know what we have to go through here; the hardships are innumerable, and anything in the nature of a letter or paper greatly helps to cheer one up. Wishing all brother bee-keepers success.—No. 2366, Pte. Julian E. Lockwood, "D" Coy. 15th Platoon, 1/5 Batt. Norfolk Regt., 162nd Infantry Brigade, 54th Division, Mediterranean Expeditionary Force.

[We did not receive the above letter until Nov. 8th. The blanks are the work of the Censor.—EDS.]

REVERSIBLE ENTRANCE.

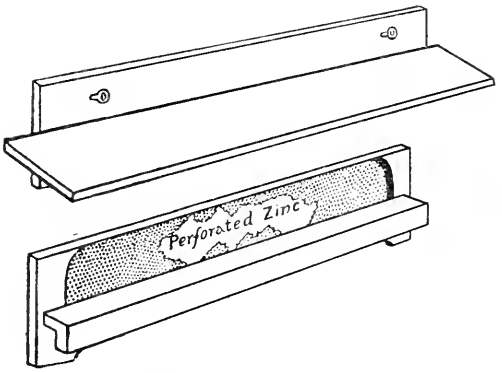
[9196] As requested by Mr. L. H. Smales in the issue of the B.B.J. for Oct. 21st (9193) Reversible entrances, I have pleasure in giving sketches of same. The hive I specially refer to in the photograph is the one I am seen standing behind. (p. 376, Oct. 14th). I consider this to be absolutely perfect for the moors. The body box is made to contain nine frames, and the lifts are self-contained section racks, thus dispensing with loose ones. The reversible entrance or shutter is detachable and fits in a slot, as shown in the sketch, and when in position either way the detachable porch is fixed over with screw eyes, and keeps the shutter fast down, and it is impossible for bees to escape. This arrangement can be adopted to any single-walled hives, and any number of hives can be opened or closed in a very few minutes, using, of course, a carbolised cloth or feather. The hive-body is fixed to the floor-board with permanent laths, screw eyes being used to fasten to floor so that each can be cleaned separately. The sheet of perforated zinc for the top is made on a frame which just fits into the top lift, the edges of the zinc resting on the four sides, when four small screws will suffice to fasten. The hive roof is covered with zinc, and is a flat top sloping to the back, so that it is also rainproof, which is a very important matter on the moors in wet seasons.

I do not believe in legs either, as without them the hives sit in the cart and do not budge when travelling. A hive on

legs will rock no matter how you tie them down.

There should also be a square hole in the floor covered with perforated zinc, so that you get a draught through the hive when travelling, this can be closed when the hives are set down. When we get the bees home again we transfer them back to clean W.B.C. hives for the winter.

I noticed the question of rent raised in a previous number of *Journal*, it is usually 1s. per hive.—W. BRADBURN.



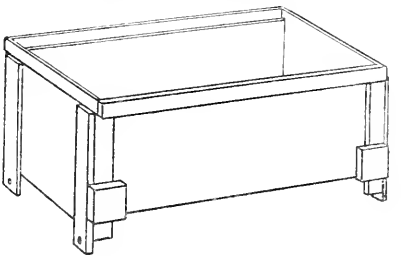
TOP, DETACHABLE PORCH.
BOTTOM, DETACHABLE SHUTTER IN POSITION WHEN ENTRANCE IS OPEN.

BLACKS *v.* ITALIANS (p. 386).

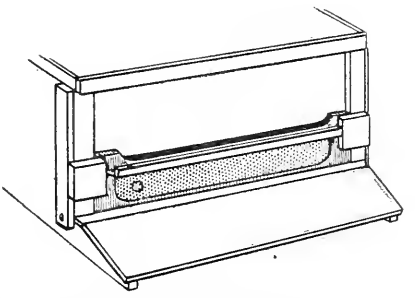
[9197] I have already decided in favour of Goldens, not that I think colour has anything to do with their general qualities, but that they suit my particular district. There seems so many things we must think about before we praise them, but I find them hardier. I do think Mr. Trowse is not quite fair when he states that some bee-keepers condemn them from selfish motives. For instance, if one lives in a late season district I don't see how they could do well, unless one was prepared to have more colonies and unite afterwards, as they appear to use up all spare food for brood until the flow comes, then, if there is a slack time when they are at full pressure, they get vicious. His tips for quietness at the end are much more acceptable, while the fate he claims for Blacks will be in store for the Italians unless this question of breeding is seriously taken into account, and a proper exchange of queens made. At least, this is my opinion for what it is worth, and I intend to change mine. I also think our funny winters lately have something to do with the loss of our insects.—A. H. HAMSHAR.

DOUBLE CAPPING OR SECTIONS.

[9198] On looking at my sections about a fortnight ago I thought they had begun to granulate, as some of the cells appeared to have some cloudy substance in them—being opaque. I placed them on a tank of hot water at a temperature of 104 to 105 degrees. I had a higher tem-



HIVE BODY WITHOUT FLOOR OR SHUTTER.



FRONT OF ABOVE SHOWING FLOOR AND DETACHABLE SHUTTER FIXED, ENTRANCE CLOSED.

perature at first (115 to 125), but that was too hot, as it made the honey at the bottom part nearest the heat swell and touch the cappings of some of the cells, giving them a greasy appearance, so I reduced temperature as above.

The other day I made an examination of them to see if they had become reliquefied, and found no improvement. I therefore made a closer examination and found it did not seem to look quite like granulation, and then the thought struck me that the cells were double capped, or they had that appearance. I found I was right, and on moving the outer cappings of some cells they became clear. I found just a thin layer of honey between the two cappings.

The cells in question are near the outsides, and are caused, in my opinion, by there being a bad honey flow, then a few (about three) good honey days, when the honey simply rolled in. I take it the bees were going to finish sections off rather short round outsides, and then the rapid flow of nectar for a few days caused them to draw the outside cells out beyond the other cells already sealed, and having filled these cells they raised the

adjoining cells where they were short, and made them a bit higher, filled them with honey and capped them again. One section on which I have made my examination shows quite plainly, at least, to my mind, that is the case.—J. FAIRALL, JUN.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

G. THOMS (Paisley). *Queen Cast Out.*—There is nothing to indicate the cause of death. The queen appears quite normal. She is a hybrid, young and mated. It is quite possible there is another queen in the hive, and that this one has met her death in a fight for supremacy.

Suspected Disease.

"SELMA" (Wigton), W. F. LONGRIGGE (Kent), C. D. CARDALE (Glos).—The bees are suffering from "Isle of Wight" disease.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

TWENTY exceptionally well made W.B.C. hives, two lifts, painted, 10s. each; empty section racks, 1s. 3d. each; eighteen rapid feeders, metal, 1s. each. Illness compels sale.—OWNER, c/o BEE JOURNAL, 23, Bedford-street, W.C.

SOFT BEE CANDY, medicated or plain, 1lb. glass top boxes, 7d.; postage, 4d.; 2lb., 1s. 2d.; postage, 5d.; reduction for 7lb. and over.—Address "SUGAR," "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, cloth-bound copy "Bee-Keepers' Record." Vol. 7, year 1889.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, GEAR EXTRACTOR. Must be good condition.—LARGE, Witton House, Norwich, Norfolk. v 66

WANTED, HONEY in bulk. Sample and price. — HISCOCK, 129, Oxford road, Reading. v 65

FOR SALE.—100 hives, 5s. each; Cowan extractor, 20s.; large extractor, with free-wheel brake, 40s.; 1 ripener, 10s.; 6 ripeners, 5s. each; uncapping tray, stand, and lamp, 10s.; feeders, 9d. each; metal ends, 1s. gross; solar wax extractor, 5s.; steam jacket wax extractor, 7s. 6d.; large capping strainer, 40s.; f.o.r., all in first-class condition. Leaving district.—J. CUNNINGHAM, Stetchworth, nr. Newmarket, Cambs. v 64

A PIARY for sale, 24 colonies to winter: 8 May swarms and early swarms, in 14 box-frame hives, containing about 130 brood frames built out complete, 7 skeps, hives, and 3 temporary boxes. Not fed up for winter. Owner 85 years, past all work and correspondence. Would accept £10 10s. if removed and cleared from premises by buyer, including all belonging to apiary. About 130 built-out brood comb frames, in hives, also about 32 section racks ready to go on, sections in flat, 9 empty box-frames, 5 skeps, empty, may stand the winter.—J. G. K., Grove House Apiary, 7, Victoria-road, Southborough, Tunbridge Wells. v 63

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, good lantern slides on poultry-keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, for dissecting purposes, old, worn-out, or otherwise useless queens, alive.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print below a further list of names to those sent in. We shall be pleased to have other names as soon as possible.

Major P. G. Pennymoore, Brierley Hill, Staffs.—2nd Monmouths.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. Herrod-Hempsall,
Secretary.

Amount already acknowledged	70 lbs.
Miss M. Coates	3 ,,
Mr. W. H. Stokes	6 ,,
Mr. G. Bryden (1st prize Dairy Show)	2 ,,
Miss G. A. Warley	2 ,,
Total	83 ,,

BELGIAN REFUGEE FUND.

	s.	d.
Mr. M. A. Saint	5	0

REMITTANCES.

Since the new postal regulations came into force the bulk of small remittances have been sent in stamps. We do not object to this for sums up to 2s., but when stamps are sent, please send *halfpenny ones*. We can always use two halfpenny stamps when a penny stamp is required, but we cannot split a penny stamp into two half-penny ones.

May we also remind correspondents that the postage on letters is now one penny for *one* ounce instead of *four* ounces. Care should be taken that postage is fully paid, or the letters may be refused.

Winter Packing.—Now that the colds of winter are with us it is well to see that bees are warmly wrapped up. Internal heat has to be kept up at a sacrifice of material and energy. It can be largely conserved, however, by overhead packing, which keeps it from being dissipated by upward escape. In well-made hives this is the only place where special care should be observed in wrapping up warmly. The packing should be so arranged that while there is a certain amount of upward ventilation there must be no chilling draughts and no loss of heat. Some believe in a large entrance, but it is inadvisable to make it of a size out of proportion with the colony inhabiting the hive. Thus it follows that while a powerful lot of bees may benefit by a large entrance of six to eight inches, that of a small lot should be contracted to about half an inch. To ensure that they can withstand the rigours of an inclement winter, it is also advisable that bees should be contracted so that the cubic capacity of the hive may have some relation to the number of bees inhabiting it. This may be secured by contracting the number of combs forming the brood body, thus confining the bees on a limited number by placing the others behind the division board or dummy. Small lots of bees are generally not worth preserving, whereas a strong stock is its own best

preserver—as undoubtedly the old adage holds true that the best packing for bees *is bees*—therefore endeavour to have all strong. Perhaps the most essential factor securing safe wintering is the food in the hive. It should not only be present in the hive, but it must be sound and healthy, and, moreover, it should be readily available. A winter passage helps to secure this, but the best guarantee for its proper arrangement is to see that it is stored early enough in autumn for the bees to make their own arrangements in storing. Their instinct teaches them to place it to the best advantage. Then, with an occasional mild day, allowing a cleansing flight, they can rearrange it to suit all contingencies. All hives must be made thoroughly watertight overhead before the approach of winter, as internal damp brings on dysentery and other bee ills. Have plenty of bees, ample healthy stores, a fertile queen, sufficient packing, and a dry hive, and bees can survive safely the most rigorous winter we experience in our country.

"*Killing*" *Bees.*—Very frequently on visiting bee-keepers afflicted with diseased bees I am asked how they can get rid of the bees humanely before burning up frames and other fittings of the hive interior. Perhaps the fumes of sulphur are as effective as any, and being so well known, and the means so generally available in every household or neighbourhood, they can be recommended. Steep linen or cotton rags in melted sulphur and set them alight, or place ground sulphur in an earthenware or tin dish and apply a match, setting this on the floor-board in an empty box with the other placed above. Close up all cracks and then the bees' dying agony will be as short as possible. A simpler plan may be to chloroform them. After dark, when all the bees are at home, close the entrance. Then remove all wraps except the quilt next the frames. Pour over this cotton cover about a wineglassful of a mixture of about equal parts of ether and chloroform, quickly replacing the other wraps overhead. The liquid should be poured across the frames. There will follow a momentary roar from the bees, and then dead silence! If the hive is opened a few minutes later every bee will be found lying dead on the floor.

Bisulphide of carbon is at the same time the easiest, quickest, and most effective drug to use, but there is a little danger attending its application on account of its action in the hands of the uninitiated.

It may be worth while to add my plan for getting rid of wasps when they build in the ground, in roofs of buildings, and similar places. I thoroughly soak a wad of cotton-wool in benzine, place it in the entrance, build some contrivance, such as a turf chamber, to keep in the fumes, and the deed is done.

Propolis.—My district is not one where much propolis is found, and I fancy my bees are not much given to propolising. Consequently, I have not much trouble with this substance in handling my frames, and very little work in cleaning my sections. This season I had a new experience when dealing with bees whose owners are "somewhere in France." In one apiary the bees were rather crusty old blacks, in the other they were yellows or a cross from Italians. In both cases they were the most extraordinary bees to propolise I ever encountered. Everything was daubed so liberally that it took all pleasure from the handling of frames and sections. The labour required to scrape and clean sections for the market was immense, and even then the marks were so vivid that in my eyes the value of the finished article was depreciated very considerably. The strain of bees had no doubt something to do with it, but I feel the main cause was the superabundance of the material all round the apiaries. A liberal allowance of Scrubb's ammonia in hot water cleared the hands with wonderful ease.

"BEE-KEEPING SIMPLIFIED."

By W. Herrod-Hempsall. Price 6d. net
A few comments by J. B. Lamb.

When at the close of any meeting a vote of thanks to the chairman has been proposed and seconded, he has to relinquish for the time being his duty of putting resolutions to the meeting, owing to the fact that he is so closely concerned with the motion in question. It will be understood, therefore, that as the junior editor of the British Bee Journal is the author of the recently published handbook entitled, "Bee-keeping Simplified," he should stand aside whilst some impartial person offers a few comments thereon. Hence my intrusion upon the columns of the *Journal*.

In my capacity as chairman of the Middlesex Bee-keepers' Association I have had the pleasure of attending numerous lectures by Mr. Herrod-Hempsall, who for many years has been expert to the association, and one feature in his lecturing which has often struck me is the homely way in which he conveys practical instruction in bee-keeping to his hearers, with the result that he obtains the desired "grip" upon their attention. There is a distinct difference between his style and that adopted by many professional lecturers, the reason being that Mr.

Herrod-Hempsall addresses a large audience in the colloquial style in which he would teach half-a-dozen students at an agricultural college.

These introductory remarks will make my meaning clear when I say that the instructions and advice given in the handbook referred to are in the simple and concise style adopted in Mr. Herrod-Hempsall's lectures. Bee-keepers who know little of the subject, as well as cottagers and smallholders who wish to keep a hive or two of bees, but wisely desire to learn as much as possible about bee-keeping before making their purchases, will find in the handbook all the information they will require at first. Unfortunately, too many persons buy their stocks of bees before they know anything about the subject, then when the bees have died from starvation or disease, or when the colony has dwindled seriously from incessant swarming, they either buy a guide book in order to learn how bees ought to be managed, or give up bee-keeping in disgust. The instructions and explanations given in the text are made clear by means of a large number of illustrations, so that the handbook will prove an excellent introduction to one of the larger guides to bee-keeping.

We all know that every encouragement ought to be given to those wishing to get out on the land as much as possible, and this is especially the case at the present time, owing to the war. Our policy for some years will have to be to produce instead of importing. Apart from the profits to be derived from the production of honey in our own isles, and the advantages conferred upon fruit-growers by bee-keepers, the nation will benefit from every ton of home-raised honey which takes the place of that imported from other countries.

It has often been said that expert violinists and pianists very rarely prove to be able teachers, mainly because it is difficult for them to appreciate the initial troubles which beset every beginner. So it is with practical bee-keeping; the fact that a person has an expert knowledge of the subject is no criterion that he is qualified either to lecture or to write upon bee-keeping for beginners. Mr. Herrod-Hempsall does not labour under a disadvantage in this respect, because his position as junior editor of both the BRITISH BEE JOURNAL and the BEE-KEEPERS' RECORD enables him to appreciate the numerous little difficulties experienced by beginners, and this handbook has been written with the view of its proving a friendly guide, thus adding to the ranks of efficient bee-keepers.

A really useful service could be rendered to the bee-keeping industry by presenting copies of this up-to-date handbook to inexperienced bee-keepers who have no means of obtaining access to bee-keeping literature, and there are many of these in country districts where bee journals and guide-books do not reach. Ignorance is too frequently the cause of cottagers and smallholders retaining diseased colonies, which eventually prove of serious damage to neighbouring bee-keepers.

THE SALE OF HONEY.

Much has been written on the marketing of honey in general; but in view of the present scarcity and increased cost of jars, it may not be amiss if I write a few lines for the readers of the "B.B.J.," indicating how my partner and myself have managed to dispose of our honey this season. We made a start in bee-keeping about the beginning of last February with four stocks. During the season we took over 1½cwt. of saleable honey from them.

On inquiry we found that the retail shop-keepers who generally supply the screw-cap honey jars were out of stock, or, those who had a few, were asking 3s. per doz. for them. We missed no opportunity after that in letting our friends know that we would supply our honey at 10½d. per lb. if customers brought their own jars.

This answered admirably, and in a short time led to the disposal of over one cwt. of the honey, and now we are quite sold out. It is seldom one hears the tie-over jar mentioned, but with a little care and practice, really presentable jars of honey may be turned out at little cost.

Suitable 1-lb. glass jars may be bought very cheaply from secondhand bottle dealers (the writer has lately secured two gross for 9s. the lot), and a little washing soda and hot water will soon have them spotless and brilliant.

The jars should be tied over with two thicknesses of paper, the inner paper being butter paper and the outer parchment. These may be bought at the rate of 7d. per lb., and a pound of each will cover a very large number of jars. Cut the papers into squares 1½ inches larger than the diameter of the jars, so as to allow a "turn-over" of ¾ inch all round the jar. See that the top of each jar is quite clean and free from spots of honey.

Immerse the pieces of parchment in warm water, and lay a wet piece upon a square of butter paper, place over the top of a jar, press down the edges, and run a piece of thin twine twice round the neck of the jar. Before tying the knot,

pull gently at the paper, where necessary, to remove the creases, then tie. Allow the paper to dry before trimming the edges with scissors. The result will be a snowy-white cap stretched as smooth and tight as a drum skin. Of course, the tie-over jar does not compare with the screw-cap for wholesale trade, but for those who are able to dispose of their honey direct to consumers it is well worth considering.—LANCASTRIAN.

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9199] With a view to increasing our present knowledge of the "Isle of Wight" bee disease and to relieve the usual monotony of the winter months in the bee world, I venture to give my experience.

I trust our esteemed editor will allow me space to bring to the notice of BEE JOURNAL readers what I believe to be the greatest topic amongst bee-keepers at the present time, *i.e.*, disease, whilst I hope others with experience will give us their conclusions.

By doing so it may be possible in the spring to get an idea of where we are, and what remedies can now be relied on. Let us pick out the good things and drop the useless ones from the confusion that presents itself to the ordinary bee-keeper to-day.

The number of reputed cures that are now placed on the market and the many that have fallen into obscurity in recent years makes sometimes quite a puzzle to even old hands.

Sometime ago we were told that this disease in the southern counties was showing signs of abating. I wonder if this can now be said, or is it only that those districts have been so denuded of bees that there are very few cases to be reported on?

This would be most useful knowledge at the present time to those bee-keepers in the Midland and Northern counties where the disease is making great ravages.

Again, it was stated—at least that was the impression I had—that the disease was of such a nature that in time it would so weaken itself by passing through numerous hosts, that at length it would become apparently of no importance, and would wear itself out. Can southern bee-keepers inform us on this point, or is this one of the things that must be dropped into obscurity?

Also, considerable hopefulness was created on the assumption that immune bees could be selected, and even the doubtful possibility of an immune strain being imported from abroad. As far as my experience goes I have yet to see a stock of bees that has proved itself immune. Nevertheless, I have seen stocks which showed signs of the disease quite plainly that have held out for a considerable period before they succumbed. I have also examined imported stocks of foreign bees reputed to be immune to "Isle of Wight" disease, that have developed the disease in a very short period, and others that have shown no sign or symptoms for a long time.

Therefore, as far as my knowledge goes there is no difference in race for resistance.

I have been particularly interested in two stocks, or rather one stock, the only survivor of an apiary of thirty stocks that went under during the winter of 1911 and 1912. This one stock gave off a very strong swarm during the summer of 1912, and soon after both colonies showed signs of disease.

For over two years these stocks survived without the aid of any remedy or attention. There was always visible from both stocks a small quantity of crawlers which prevented the stocks ever getting strong. Still, they survived, but during the two following summers never covered more than six combs each. The owner still believes that but for an accident during a gale in March, 1915, his bees would have been alive now.

Another stock under my notice this spring, the only survivor of an apiary, was very weak. I advised destruction, which was not carried out. The owner, a bee-keeper of experience, battled with

the disease in this stock without the aid of drugs, just keeping the surroundings of the hive covered with lime, and keeping everything clean, till from a stock of bees on two frames in May he had the satisfaction of taking a box of shallow frames full of good honey in August. I can fancy someone suggesting the possibility of a stray swarm taking possession, but I can relieve them on this point. I feel quite sure no such thing happened. It was simply a prolific queen aided by good weather in May and June that kept the disease in abeyance. I have no doubt but that this stock will soon go under now that the breeding season is over. In addition to the above I have observed stocks undoubtedly diseased that have been treated with drugs, which have held the disease at bay for a period. This condition is usually attributed to the result of the remedy applied. In my opinion just the same thing may have happened if nothing has been administered except cleaning the hive and its surroundings of dead bees, crawlers, and excreta droppings.

I am of opinion that there are two stages of the disease with a period between in which the bees apparently temporarily recover; but when the disease reaches its final stage, especially if this happens out of the breeding season, the bees are beyond all aid.—J. PRICE.

ITALIANS *v.* BLACKS.

[9200] I have been interested in the articles appearing in the "B.B.J." regarding the above varieties. I will give you my experience as an amateur with the above bees. I commenced with two hives of each. My Italians are good workers, gather 15 to 20 lbs. per hive more honey than the Blacks, but the most vicious brutes alive. I cannot go near the hives except I am protected with veil and gloves. During the honey season when taking the supers off they attack me violently. On one occasion, finding they could do me no harm, they went deliberately and stung a lad hoeing in a field sixty yards away, also another boy on the road about the same distance off. The farmer's men in the adjoining yard are not allowed to stack the corn without being attacked by them; the language the men use about the bees I dare not ask you to print. I saw the farmer (a former bee-keeper) and told him if the bees annoyed him I would have them moved further away. He replied, "Let them stay where they are; they (said he, pointing to the men on the stack) are soft; it would take a lot of bees to frighten me." Judging by appearances I think he spoke the truth. There is one thing in their favour, the plums in that corner of the garden used to mysteriously disappear before the hives were there; now they are gathered with the rest in the early morning after closing the hives over-night. Wasps or robber bees that alight on those hives are quickly sent about their business.

My Blacks are very quiet to handle; fair honey gatherers, but do not seem to have the courage to defend their hives; one has already been destroyed by wasps and robber bees. The other was attacked until I closed the entrance entirely with perforated zinc. They have not near the quantity of bees for wintering as the Italians, and seem in a dormant state.

P.S.—The Editor now informs me that it is the "Isle of Wight" disease they are suffering from. Alas, my poor Blacks! To-morrow I destroy them with sulphur fumes.—F. C. WISBECH (Cambs).

WITH THE BEES AT THE FRONT.

[9201] I notice in Sergt. Atwell's Diary (p. 393) he refers to Maubeuge as a village. I remember this place quite well, especially the forts, as a number of fine houses were blown up, possibly due to the fact that they were in the line of fire. Maubeuge, according to the official map of 1909, had a population of 21,520, Louvroil 4,750, and Hautmont 13,125. Both of these places are within three miles of Maubeuge, and on the Maubeuge-Landrecies road. Sergt. Atwell's article is very interesting to me, having been through these places myself. I hope you will excuse writing as I have to lie on my side. With kindest regards to yourself and BRITISH BEE JOURNAL readers.—L. KETTLE.

[Several letters are unavoidably held over till next week.]

ECHOES FROM THE HIVES.

It may interest you to know that notwithstanding the unfavourable weather experienced here (West Suffolk) during July and the first half of August, my bees have given the fine average of 208lbs. of extracted honey per hive. I received such a number of replies to two small advertisements in the BEE JOURNAL that I was unable to reply to them all. I could have disposed of several tons of honey had I got it. Trusting all bee-keepers have had a good season.—C. H. BEER, Bury St. Edmunds.

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HOFFMAN (Rothesay). — Hive C. We should say that a swarm issued after you put on the third section rack, and the young queen was lost or killed when taking her mating flight. Hive B. The symptoms you describe point to "Isle of Wight" disease. It is quite possible the stock is queenless, or contains an unmated queen. Medicate any candy you give them and keep the hive supplied with Apicure and Naphthaline. Should the bees die during the winter burn the whole contents of the hives—bees, combs, frames, and quilts — and scorch the hive out with a painter's blow-lamp, or wash out with a strong solution of Izal or carbolic acid. It is far safer to start with new frames, &c, than to boil them and use again. Do not give barley sugar, but soft candy. The sugar would not be likely to cause the trouble.

Suspected Disease.

TURNER (Yorks.).—It is "Isle of Wight" disease.

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Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

FOR sale, finest honey, 1cwt., and dozen sections. —SMITH, decorator, Caistor. v 69

EXTRACTOR and useful sundries, cheap.—WEBB, 3, Willoughby-lane, Tottenham (Park Station). v 68

OFFERS for 61lbs. cake of pure bees-wax, good colour.—Apply, The Forge, Hurstbourne Tarrant, Andover. v 67

BEES, bee-hives, and appliances for sale; list for penny stamp.—GREGSON, Ashton-street, Lytham, Lancashire. v 72

WANTED, 28lbs. secondhand honey tins; cash. —ROWE, 6, King's-road, Cardiff. v 71

TWENTY exceptionally well made W.B.C. hives, two lifts, painted, 10s. each; empty section racks, 1s. 3d. each; two, one dozen travelling boxes, 2s. each. Illness compels sale.—OWNER, c/o BEE JOURNAL, 23, Bedford-street, W.C.

SOFT BEE CANDY, medicated or plain, 1lb. glass top boxes, 7d.; postage, 4d.; 2lb., 1s. 2d.; postage, 5d.; reduction for 7lb. and over.—Address, "SUGAR," "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, cloth-bound copy "Bee-Keepers' Record." Vol. 7, year 1889.—"F" RODHEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, HONEY in bulk. Sample and price. — HISCOCK, 129, Oxford-road, Reading. v 65

FOR SALE.—100 hives, 5s. each; Cowan extractor, 20s.; large extractor, with free-wheel brake, 40s.; 1 ripener, 10s.; 6 ripeners, 5s. each; uncapping tray, stand, and lamp, 10s.; feeders, 9d. each; metal ends, 1s. gross; solar wax extractor, 5s.; steam jacket wax extractor, 7s. 6d.; large capping strainer, 40s.; f.o.r., all in first-class condition. Leaving district.—J. CUNNINGHAM, Stetchworth, nr. Newmarket, Cambs. v 64

APIARY for sale, 24 colonies to winter: 8 May swarms and early swarms, in 14 box-frame hives, containing about 130 brood frames built out complete, 7 skeps, hives, and 3 temporary boxes. Not fed up for winter. Owner 85 years, past all work and correspondence. Would accept £10 10s. if removed and cleared from premises by buyer, including all belonging to apiary. About 130 built-out brood comb frames, in hives, also about 32 section racks ready to go on, sections in flat, 9 empty box-frames, 5 skeps, empty, may stand the winter.—J. G. K., Grove House Apiary, 7, Victoria-road, Southborough, Tunbridge Wells. v 63

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, good lantern slides on poultry-keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, for dissecting purposes, old, worn-out, or otherwise useless queens, alive.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print below a further list of names to those sent in. We shall be pleased to have other names as soon as possible.

Pte. Jas. McBride, Dumbarton, Scotland, 1/9th Argyle and Sutherland Highlanders. (Missing.)

Would you kindly add the name of one of our local bee-keepers to your "Roll of Honour"? Private James MacBride, 1/9th Argyle and Sutherland Highlanders. He was posted as missing on May 10th, along with one officer and eight men. Their names are not on the German Official List of Prisoners. His parents are very anxious about him, and would welcome any news concerning him. His parents reside at 6, Poindfauld Terrace, Dumbarton, Scotland.—JOHN LOCKHART.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. HERROD-HEMPSALL,
Secretary.

Amount already acknowledged	83 lbs.
Misses K. and F. Wilcox ...	6 ,,
Miss Jenny Brewster	4 ,,
Miss Barker, Lakeside	12 ,,
Jas. Gladding (2nd A.M. Royal Flying Corps)	6 lbs.
Mr. J. Lockhart	12 ,,
Mr. J. A. Hanby	14 ,,
Total	137 lbs.

BELGIAN REFUGEE FUND.

	s.	d.
Amount already received	5	0
Mr. J. Lockhart		10
Total	5	10

REMITTANCES.

Since the new postal regulations came into force the bulk of small remittances have been sent in stamps. We do not object to this for sums up to 2s., but when stamps are sent, please send *half-penny ones*. We can always use two half-penny stamps when a penny stamp is required, but we cannot split a penny stamp into two half-penny ones.

May we also remind correspondents that the postage on letters is now one penny for *one* ounce instead of *four* ounces. Care should be taken that postage is fully paid, or the letters may be refused.

REVIEW.

Bramble Bees and Others. By J. Henri Fabre. (London: Msesrs. Hodder & Stoughton.) Price 6s. net. We recently (BRITISH BEE JOURNAL, page 405) alluded to the death of this famous naturalist, whose strenuous life work was completed at the age of 92. He revealed a new world to us, the world of the infinitely small, with its little inhabitants, each living and dying in its own way. Some of his patient and careful studies so beautifully described in the ten volumes of "Souvenirs entomologiques" have by translations been made familiar to English readers. This is the fourth volume published by Messrs. Hodder & Stoughton, and it is as admirably translated by Mr. A. Teixeira de Mattos, as the three previous ones. In this volume the translator has collected all the essays on Wild Bees scattered through "Souvenirs entomologiques" with the exception of those which already form the contents of a volume entitled "The Mason-bees." The book before us is a capital example of the painstaking industry to which the author devoted his life, and it is only those who have had

any experience of what such work entails can appreciate the labour expended in recording his observations, many of which bring the shallow modern optimist to shame. Fabre has worked as a naturalist in a village in Languedoc for more than three-quarters of a century, and was only discovered when he said of himself, "I'm past work." As to his worth there was no question, and Maeterlinck, no mean authority, calls him "one of the glories of the civilised world." Rostand spoke of him as a savant who "thinks like a philosopher and writes like a poet."

In the volume before us there is a good deal to wonder at, and much that upsets previous theories, but Fabre was a searcher after truth, would see all there was to be seen, and recorded his observations without building upon them pet hypotheses. The opening chapter on "The Bramble-Dwellers" introduces us to that class of Hymenoptera who makes use of bramble stumps as suitable cradles for their progeny. Fabre found near his house nearly thirty species of bramble-dwellers, which include members of the Melliferous, Hunting, and Parasitical Hymenoptera. While some of these remove the pith from the dry stems, others avail themselves of the old galleries, which had been abandoned by other insects after serving as a home for the builder's family. The hollow cylinders are divided by partitions into more or less numerous storeys, each of which forms the cell of a larva. The partitions are made of clay or with a concrete formed of pith-scrapings cemented with a drop of saliva. At the head of bramble-dwellers, both as regards the finish and magnitude of the structure stands the Three-pronger Osmia (*Osmia tridentata*), to whom this chapter is specially devoted. Her gallery, the diameter of a lead pencil, descends to a depth of twenty inches, and is at first almost cylindrical. When the bramble has been bored to the requisite depth, at the bottom of the gallery a pile of honey is placed on which an egg is laid; then a partition is built to separate this cell from the next, for each larva must have its separate chamber. The material used for the partition is bramble-sawdust glued into a paste with saliva. The insect does not go outside to find the material for this partition, but obtains it from the thin coating of pith which she left in reserve during the boring. This she scrapes away with her mandibles, keeping within a certain radius, corresponding with the dimensions of the cell she is going to build next, and hollows out more in the middle so as to leave the cavity resembling a little barrel. This space will form the second cell, and the process of storing honey, laying the eggs and making the partition is repeated until the end of the cylinder is reached, when the Osmia closes up the case with a thick layer of the same mortar. If a bramble be split during winter, the chambers divided by partitions are easily seen, each little barrel containing a reddish transparent cocoon, the whole suggesting a string of amber beads. In this string of cocoons the oldest is evidently the lowest one, the one whose cell was the first built, and the youngest the one at the top. As there is no room in the shaft for two Osmiae at a time, they must, when they leave their cocoon, emerge from the shaft by the only opening, which is at the top. The question which Fabre undertook to solve was whether the hatching took place in the order of primogeniture, or if as supposed by Leon Dufour, it might not be —by a singular exception—that the youngest of the Osmiae bursts her cocoon first and the oldest last. Fabre found that nothing of the sort took place. It is true the bees have to leave by the same opening, but the hatching takes place very irregularly. Fabre explains this by saying that "each germ, each grub has its individual energy, determined we know not how, and varying in each germ or grub. This excess of vitality belongs to the egg before it leaves the ovary. Might it not, at the moment of hatching, be the cause why this or that larva takes precedence of its elders or its juniors, chronology being altogether a secondary consideration?" The same brood forming the string of cocoons contains both males and females, and the two sexes are divided in the series indiscriminately. A rule among bees is, for the males to leave the cocoon earlier than the females. In the case of the Three-pronged Osmia, the male has a week's start, so that there is always a certain number of males hatched seven or eight days before the females. These do make an attempt to bite through the partitions and push past the cocoons in front of them, but soon become exhausted, give up the attempt, and then wait until those nearer the entrance have made their way out. Their patience is not inexhaustible, and they are not put to an over-long test, for within a week or less the whole string of females is hatched.

These and many other facts Fabre has been able to establish by his observations carried on for a number of years, not only with brambles but in glass tubes, which the bees took to as readily as they did the brambles. The facts are astonishing, and rudely shake the theory of natural selection of which Fabre says "The law of natural selection impresses me with the vastness of its scope; but whenever I try to apply it to actual facts it leaves

me whirling in space, with nothing to help me to interpret realities. It is magnificent in theory, but it is a mere gas-bubble in the face of existing conditions. It is majestic but sterile. Then where is the answer to the riddle of the world? Who knows? Who will ever know?"

Another fact which the author has been able to establish is that the mother decides the sex of the bee-egg, and in this is guided by consideration of space. Every page of the book is fascinating reading, and Fabre shows how miraculous is the instinct of the small creatures he has studied. The stories he tells of the ways of insects show the dominant part instinct plays, and how little reason has to do with them. Now that Fabre has passed away, how pathetic is the closing paragraph of Volume III. of the "Souvenirs entomologiques," reproduced at the end of the chapter on the "Permutations of Sex" in the book before us: "Dear insects, my study of you has sustained me, and continues to sustain me, in my heaviest trials. I must take leave of you for to-day. The ranks are thinning around me and the long hopes have fled. Shall I be able to speak to you again?" Fabre did speak again, with the result that we have some of the most beautiful works on natural history that have ever been produced.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Monthly Meeting of the Council was held at 23, Bedford Street, Strand, London, W.C., on Thursday, November 18th. Mr. W. F. Reid presided. There were also present Messrs. G. S. Faunch, G. W. Judge, G. J. Flashman, J. Herrod-Hempsall, A. G. Pugh, J. N. Smallwood, and Rev. F. S. F. Jannings. Association representatives: Messrs. G. Bryden (Crayford), G. Horscroft (Essex), F. W. Harper (St. Albans), and the Secretary, W. Herrod-Hempsall.

Letters of regret at inability to attend were read from Miss M. D. Sillar, Messrs. C. L. M. Eales, E. Walker, T. Bevan, and Dr. W. Anderton.

The minutes of the Council Meeting held on October 21st were read and confirmed.

Mr. A. Rewe was elected a member of the Association.

The report of the Finance Committee was presented by Mr. Smallwood, who stated that payments into the bank for October amounted to £38 1s. 3d. Payments in October were nil. Payments recommended amounted to £5. The balance at the bank at the end of October was £151 14s. 8d.

It was decided to make arrangements for insurance in 1916 under the usual conditions.

The report of the Examining Board on the lecture test held previously in the day was presented by Mr. A. G. Pugh, and it was resolved to grant Final Certificates to Rev. F. S. F. Jannings, Messrs. W. Carr, and J. W. Heard.

Next meeting of Council, December 16th, at 23, Bedford Street, Strand, London, W.C.

On account of the war the British Bee-keepers' Association will shortly be under the necessity of removing their experimental apiary from the grounds of The Zoological Society of London, and will be glad to receive suggestions for a new site or offers from those who may be in a position to find temporary accommodation in the neighbourhood of London, so that the useful work done in the past may be continued.—W. HERROD-HEMPSALL, Secretary.

BLURTS FROM A SCRATCHY PEN.

THE BUSINESS OF HONEY PRODUCTION (*continued*).

The tale of the British Honey Company is told, not with the idea of superior experience criticising what is history. It is given as part of the subject matter of these articles. Yet there are conclusions which will inevitably arise, and if from the sins and errors of the past we may gain wisdom for the future, why, then, the Honey Company will not altogether have been a failure. All historians should be impartial, or, if that is impossible, at any rate endeavour so to be. Therefore I shall quote extensively from documents which cannot be contradicted; to wit, the official proceedings of the company as reported in the BEE JOURNAL of 1885 and onwards, and from correspondence in the same journal during that period.

The first public meeting of the company was held at 105, Jermyn Street, on April 16th, 1885. The Rev. Herbert R. Peel presided. A list of the directors is given. The only one of these who remains to us is Thomas William Cowan. I most sincerely hope, however, I am wrong in this statement, and that there are still others. After the formal opening proceedings, the chairman moved the adoption of the report and balance-sheet. The following occurred in the course of his remarks: "He congratulated them that the shares allotted numbered nearly 6000 (£1 shares) —the shareholders had carried out their scheme in the face of a certain amount of opposition. Those who were acquainted

with the proceedings of the B.B.K.A. would remember that at the general meeting, held in 1884, a scheme was proposed for the formation of a honey market, which proposal was shelved for twelve months, it being pretty generally understood that the B.B.K.A. had not sufficient funds to establish a honey market . . . . .because that institution was supported only by the 5s. subscriptions of its members, and its funds were inadequate to cope with such an undertaking, which required a large amount of capital. . . . . The company was now thoroughly established. That position they owed to the assistance given them by the Baroness Burdett-Coutts, who had kindly granted them premises in Columbia Market. Mr. Burdett-Coutts had been good enough to say that until the company was in a flourishing condition he would not expect any rent. . . . In order to state accurately their position they had written to their solicitors asking for a statement of their claim (who) begged them not to trouble about such costs (as) they regarded the undertaking as a philanthropic rather than a commercial one. . . . He thought the shareholders were indebted to the directors, who had worked hard without any remuneration to insure success. The directors had consented to receive honey, in payment for shares, in lieu of cash."

So far the first meeting of the British Honey Company. Everybody congratulated everybody, and all went merry as wedding bells. The start was good, full of hope, full of energy, and failure seemed impossible.

An annual meeting was held on October 21st, 1886. The BRITISH BEE JOURNAL of that month and year (page 486) gave the expenses of forming the company as £610 18s. 8d. On the actual trading for a period of five months there was only a clear profit of £102 12s. 4d., leaving a debit balance of £508 6s. 4d. This does not appear particularly rosy, but the chairman and shareholders seemed to have been quite satisfied. However, as the actual balance-sheet is not available, it would be unsafe to criticise without data to work on.

A third meeting was held on August 4th, 1887. The balance-sheet showed a gross profit of £521 19s. 4d. Previous balance-sheet showed a debit balance of £508 6s. 4d. This year it was only £134 4s. 2d. The chairman's remarks do not read quite so brilliant: "Although at the present time they were not doing a very extensive business, the company was making decided progress, and there was a prospect of better times in store. They would remember that the company was not started with the expectation that it would turn out a money-making enterprise, but more for the purpose of developing a trade for the benefit of the British honey producer, and thus promote bee-keeping." It is evident that it was beginning to be perceived then, that the company was doomed to be a failure. From honey alone they could not realise sufficient profits to carry on, and to eke out, and they had dabbled in bee appliances, and a non-intoxicant drink called "Mella." It is not, therefore, with any surprise that we read in the BRITISH BEE JOURNAL, of May 3rd, 1888, a regretful announcement of a meeting at the Charing Cross Hotel, to propose the following resolution: "That it has been proved to the satisfaction of the meeting that the company, by reason of its liabilities, cannot continue its business, and that it is advisable to wind up the same voluntarily.—J. SMALLWOOD.

A TRIP TO THE HEATHER.

It was early in July when we decided to take our hives to the heather, and from the date of that decision began our preparations for the trip. Perforated zinc was procured and confining slides were made for the entrances, and in each case these were tested to make sure that the bees were properly confined when the slide was in position—a very necessary proceeding if things are to run smoothly when "the day" arrives. We decided to cover the supers with cheese-cloth, and this was also got ready.

Our apiary consisted of six stocks, four of them in very strong condition and one fairly strong, and the last one an early July swarm which we expected would feed itself up for winter. We also acquired three more strong stocks from a bee-keeper who was giving up the hobby on account of the alarming effects bee stings began to have upon him.

A friend, the possessor of a single stock in strong condition, on our invitation decided to send his stock and to accompany us himself also. Immediately the bees ceased flying on July 29th we began to pack up, and by 9.30 had all the ten hives loaded on a lorry ready for the journey. It was a lovely night, the moon being at full, when we started off on our eleven-mile journey to the heather. In the shafts we had a splendid specimen of a Shire mare, worth anything up to a hundred guineas, lent to us by a farmer on the principle that one good turn deserves another. He had been short-

handed at hay time, and he showed his appreciation of the "lift" we gave him in the hayfield by lending us his mare.

How shall I describe the glorious exhilaration of the journey through the moonlight—the ride on the front of the lorry (there was just room for the three of us) whilst we were on the level, the walk when we began to rise, and the push behind the lorry to help the mare at an extra-stiff hill, and an occasional glance round the hives to see that all was secure added a variety of interest to the trip, as did the constantly changing view of the countryside under the mystic light of the full moon!

We arrived at our destination on the moors about 3.30 a.m., just as day began to break. Whilst two of us loosed out the mare, stabled and gave her a feed, the third was busy preparing breakfast. The Primus stove was lighted and the kettle soon came to the boil, and we all enjoyed "the cup that cheers but does not inebriate." Then to work unloading.

Our host, who had been awakened by our arrival, got up, and proved of invaluable help to us. So as to have the shelter of a stone wall for the hives it was necessary to carry them a distance of seventy yards. Bee-keepers do not need telling what an awkward thing a bee-hive is for two to carry any distance. This was made easy in the following manner. A pair of rails, each about 8ft. long, was requisitioned and laid on the ground parallel to each other and about 4ft. apart; then two pieces of rope were tied round the rails near the middle and about a foot apart, so that the whole looked like the letter **H**, but, of course, with two lines formed by the ropes across the middle. A hive was lifted and placed over the ropes, then two of us took hold of the rails, one at each end, and carried it stretcher fashion. The rails closed to the sides of the hive, which swung clear of the ground, resting securely on the ropes.

In this manner the ten hives were carried with the greatest ease and comfort, and at last we had them all levelled and quilted down and the roofs secured in case of storm. Then the bees were liberated, and in the front of each entrance was placed a piece of heather as a slight obstruction to cause the bees to locate the new position of the home.

The heather, by the way, was only here and there just coming into bloom; but, the honey flow being over in our own district, we had taken advantage of the moonlit night. After a last look round to see that all was to our satisfaction we were ready to depart, and arrived home about noon, three tired but happy men.—LANCASTRIAN.

A DORSET YARN

I regret not to have had time last week to spin (on paper) "A Dorset Yarn." My eldest son is home on leave after fifteen months' campaigning in France; his letters home had always been graphic, but to hear from his own lips the epitome of the campaign is enough for one to think of this week. The retreat from Mons, when outnumbered by a hundred to one, the stand at the Marne, the continuous ebb and flow of this terrible contest up to now, is one long series of heroic deeds performed by our soldiers against tremendous odds. How near, a year ago, at La Bassée and Ypres, the enemy were to breaking our line only a very few can tell (so many went under), but now there is never any chance for them to reach us here—at any rate through our lines.

My son speaks of Belgium, when he saw it in September, 1914, as a splendid country for agriculture, the people very prosperous, the homesteads not large, but stocked with horses, cows, poultry and pigs, and not a few had bees; now these same places are in ruins and the people refugees, existing in squalid misery, all through and by the War Lord of the Huns.

He tells me of the fertile fields of France, the orchards, the fields of flowers, and the great numbers of women who are working in the fields. He is now on the hospital trains, taking the wounded from the field ambulances to the hospital camp at Rouen, Abbeville, Le Herv and Boulogne. Once he had been as far as Marseilles with a train of Indian heroes. We are thankful that up to now he is safe, and that our other two sons are doing their bit in the Persian Gulf and the Dardanelles, and are still well. The one in the Gulf says he has been to the Garden of Eden, on the Euphrates and the Tigris, and I suppose by now he is at Bagdad. The one in the Dardanelles took part in the attack of the burning hill. So many went down that day, every officer and the greater part of the men. He writes what a miserable country it is to be in.—J. J. KETTLE.

WITH THE BEES AT THE FRONT.

By Sergt. A. G. Atwell.

(Continued from page 394.)

Our advance still continued, and many and various were the articles left on the roadside by the retreating Germans. Food tins of all descriptions, old worn-out boots and clothing, helmets and broken equipment. Occasionally a few prisoners would fall into our hands; these were chiefly stragglers who could not keep up with the main force. We also passed

many large wagons and motors, some which had to be abandoned through slight defects, and others which had overturned in their haste to get away, as the roads in places were none too wide, and the ditches on either side often very deep. One rather sad sight was the number of horses which we passed, either dead or left in a dying condition, caused by the continual work over heavy roads. It was about this time, while resting in a field, that I saw one of the best hornets' nests that I had ever seen, it was built out from the branch of a tree, and I can assure you that none of us felt inclined to meddle with these huge insects, who seemed to be ready to dart at anyone who should venture too near them. The weather about this time was rather fine for the time of year, and during the warmest part of the day I noticed numbers of bees swarming round the empty jam tins which were thrown away by the troops. These were evidently bees of looted apiaries anxious to get food of any description to make up for their lost stores. It may be interesting to note that they favoured the orange marmalade, the tins from this conserve being absolutely black with them. On Sunday night, September 13th, we rested in rather a big village, the name of which I think was Boulne. All along the advance the troops had been anxious to clash with the enemy, but none of us thought that the following morning would see us launched in a most terrible fight, and that many of our comrades who laughed and chatted round the camp fire this Sunday night had but a few hours left to them in this life. However, such was the case, for the following morning, after leaving the village a few miles behind us, we dashed right into the enemy near the tiny rustic village of Chevoy Boulne. The reader might easily imagine a fine autumn day among a beautiful hilly country, shrouded in its autumn splendour of gold and bronze in all their varying degrees. He might also imagine a little old-world village, with thatched and whitewashed cottages and farms and quaint old folk, many of whom had never been more than a dozen miles from their native village. But try as he might, unless he has actually experienced it, he will never be able to imagine the awful experience of going through such a fight. The roar of the guns, the continual whizz of the bullets, the shrapnel bursting all around; that peaceful country of yesterday was to-day a veritable hell. It seems marvellous that any living thing could exist at all. Of the horrible sights of the battlefield I will say but little, it could do the reader no good to hear of them, and although they can never be forgotten, they will best be left untold. How the writer ever came through such an ordeal the One above only knows, but on this and four other occasions (of which I shall write later) I have had some of the nearest shaves that it is possible for anyone to undergo. Of course at this time there were no trenches and dugouts as there are to-day, only such as could be hastily scratched out during the night.

(To be continued.)

A MOTOR CYCLE IN THE BEE BUSINESS.

The picture shows the machine I have been running this summer for the conveyance of bees, hives, and supplies to and from the out-apiaries. The cycle is a 3½ h.p. Triumph, with free engine and clutch, 1913 model, to which is attached a canoelet side-car. This latter easily accommodates four colonies in travelling crates at one time, or 1½ ewt. of honey in 28lb. tins. Skeps of bees and honey in the comb can be carried without jar and with the utmost ease, and, indeed, the machine is now indispensable as an aid to extensive out-apiary management. It enables one to arrive on the hills fresh and ready for work, and after a hot day it is pleasant to ride gently back through the cool evening air.

I have driven the machine close on 5,500 miles, running it every day during the fine weather. The greater part of this mileage has been done with the side-car loaded. I have had no punctures, and only two stoppages worth recording—once with a choked petrol pipe and once by a faulty plug.

The chief expense is oil, petrol, and tyres, but I think this is largely regulated by the care with which one's machine is handled. Economically driven at speeds averaging 12 to 16 miles per hour, the expenditure of fuel and wear and tear is reduced to a minimum.

Since the spring the back wheel and wheel of the side-car have both been reshod once. This, with a new belt, completes the rubber expenditure. The total cost of maintenance and running seems to work out at a trifle over ½d. per mile, but, of course, expenses tend to increase as the machine grows older.

I never think it wise to have anything to do with an old pattern machine that has seen much service, because garages are expensive places to visit, and such a machine is generally in hospital more than half its time.—A. H. BOWEN, Cheltenham.

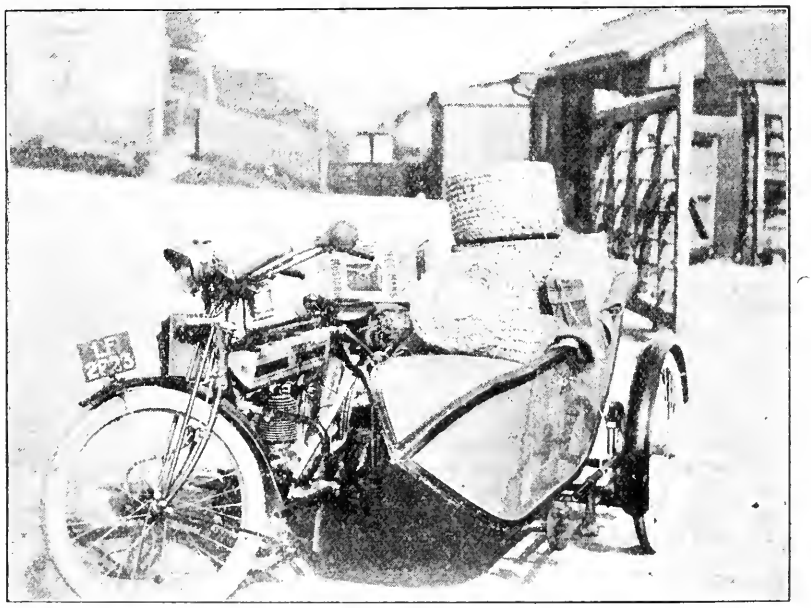
CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

Our readers will be sorry to learn that just on going to press we have heard that Mr. R. Brown, of Somersham, passed away on Monday last.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9202] I think as winter is now approaching it would be good to have the experiences of bee-keepers with the "Isle of Wight" disease. Can anyone with experience say how soon bee-paralysis will show itself after it has been known to have been introduced into the hive? I have every reason to believe it will do so in three weeks, and I have had a fair amount of experience this last five or six years, when it was first brought into this country. I am also afraid our experts are agents in carrying it from apiary to apiary by the use of the carbolic cloth; if this cloth was wetted each time I have no fear, but when it is used dry, as it often is, then comes the danger. It is very easy for an expert to use his cloth upon a hive that shows no signs—yet the disease is there. He then goes to the next apiary, his cloth is again used, in about a fortnight or three weeks the disease shows itself. I have in view two cases of two different experts, and about thirty miles apart; after the experts had been their rounds the "Isle of Wight" disease showed itself in about three weeks. The following came under my notice: On August 21st honey was carried wholesale from a very bad case of the disease into a healthy apiary, in three weeks bee-paralysis showed itself, in five weeks the owner had destroyed four stocks, in ten weeks the whole of the apiary—eighteen stocks—was destroyed, knowing as the owner did there was no cure, and this was his duty to his neighbour; the hives have all been scorched with a painter's lamp, and painted with carbolic ready for another start. Mr. Woodley says all remedies have failed with him, and my view is there is not one remedy on the market that is of any good as a cure. I do a bit of expert work myself, but my advice is be your own expert; failing this, find



A MOTOR CYCLE IN THE BEE BUSINESS.

your own things for manipulating. Wet your cloth for every hive, also your hands, either in Izal or carbolic. I use Izal for everything, and believed once it would cure "Isle of Wight" disease, but I know now it will not. I had under my care three stocks with the disease; these were sprayed about every night, both the alighting-board, quilts, top of the frames, and between the frames, and also the bees. They became more active, they became stronger. Nevertheless, the germs were there, and when the queen stopped laying the bees died out; so much for Izal. Looking up "Gleanings" I find editor Root refers to bee-paralysis as far back as May, 1899. I have read with interest, as I always do, South Staffs. and District Association report in BEE JOURNAL, November 11th, page 411, and if Mr. Rollins has found a cure he should give it to the world, and honour would be his. I will go the whole way with him in believing that foundation is a fertile source for producing the disease, and I have been writing for twenty years on that question. Regarding Foul Brood, see what editor Root says on this question: "As far back as 1899 one of our patrons sent us wax from foul, broody combs, and told us of the fact. Instruction was given to the foreman of the wax-room to look out for this upon arrival, and give it special treatment. The wax was brought to a boiling-point, or as nearly so as we could, in a barrel by itself, using a jet of steam. It was boiled for an hour, and the next day it was treated as before, and still again it was heated, after which it was mingled with the general supply, and then heated once more; this, of course, will render it entirely safe. The recent discussion regarding the power of the spores of foul brood to resist prolonged extremes of heat goes to show that even three hours of continuous boiling might not kill them; it is unwise, and certainly unsafe, to render up foul, broody combs. Wax cannot be heated with a steam jet much more than 200deg. Fahr., and never more than 212deg. Fahr., surrounded by a vat of boiling water. Even if one can thoroughly sterilize the wax, one runs a tremendous risk while going through the process of sterilization. We prefer not to receive wax from diseased combs, and if anyone has sent such without informing us there is a danger; but I do not think we can be too careful when dealing with this enemy." So much for editor Root's view, and I believe the same thing applies to the "Isle of Wight" disease as foul brood. I also agree with Mr. J. Cole, the cheapest and best cure is the fire. Tampering with the advertised so-called cures is a source of danger.—J. PEARMAN, Penny Long Lane, Derby.

"SOMEWHERE IN FRANCE."

[9203] Now that the evenings are long, and I am "somewhere in France," a few lines to the old paper, THE BRITISH BEE JOURNAL, will no doubt be of interest to those who still remain at home.

During my seven months of "Continental wanderings" in Flanders I have seen but very few apiaries, so under the circumstances I cannot say much about apiculture in this war-ridden part of the globe.

The few apiaries that I have seen consisted of skeps, but in one instance there was what appeared to be a frame hive, standing amongst the collection of what is such a familiar sight on many parts of the Cotswolds—old, well-seasoned straw "dombs." These small apiaries make very pretty little pictures, standing in the gardens of those who take such great pride in their land—the French. I read only a few days ago in a paper that "France is the best cultivated country in the whole of Europe." After what I have already seen I do not think that I should be far wrong in saying that the French beat the English as far as the cultivation of the land is concerned.

While I was in one of the base hospitals, just at the time when, under the powerful rays of the sun above, the corn in the fields around was turning into its golden hue, I was sitting out on the lawn in a deck chair taking great interest in the many varieties of bees and other insects that were all busily working the countless numbers of small white heads of the well-known nectar-producing plant, white clover. It brought back to me memories of the many happy and pleasant days that I had spent in the past handling these small brown insects—the bees.

Among the many insects that were so busily engaged in extracting the precious nectar were hive bees that seemed to be a shade lighter than our English variety, wild bees of various shades and colours, humble bees, drone flies, and other sweet-loving insects.

I have not come across any bee-keepers in either the French or Belgian Armies with whom to have a chat as yet, but hope to be able to do so before it is all over. Judging by the large number of bee-keepers that I have come across out here in the English lines, I should be inclined to venture as far as to say that although only a small industry, bee-keepers have supplied above an average number of fighting men. In many cases their next of kin are keeping things going until the day comes when we shall all be together once again, including our bees.

My small apiary is being kept going for me until I return from the participation

in the great task of the present day, the alteration of the map of Europe, or, perhaps, it would be more correct to say, the alteration of the map of the world.

I have not seen a copy of the BRITISH BEE JOURNAL or BEE-KEEPERS' RECORD since I have been out here, but all the back numbers of both papers, that are being taken in week by week as usual, and bound at the end of each year, will mean many pleasant hours for me in the future—and I hope the near future—reading up all that has happened in the bee-keeping world during my absence out here handling not bees but what are now well known as "Kultured Huns."

During these long, cold, and dreary evenings perhaps Mr. Editor will find me a little space later on to say something about this part of France.—LCE.-CPL. J. L. TICKELL.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9204] I was very interested in the remarks made by Mr. Rollins at the South Staffs and District Bee-Keepers' Association respecting the cure for "Isle of Wight" disease, and I hope soon to be on the same track myself.

I have fourteen hives of bees, having started this season with seven, in a district which is noted for "Isle of Wight" disease. Nearly every one around has been compelled to give up bee-keeping, having lost the whole of their colonies. In September last I had four hives affected rather badly by the disease, and sent you bees for examination, and you confirmed my opinion. I had been treating them with Izal, taking out each comb separately and syringing with a rubber-ball syringe, using about a quarter of a teaspoonful of Izal to a quartern of water, and gave them a good doing. I certainly found this was a check on the disease, but something more remained to be done, as bees seemed still weak, and some would even roll down the alighting board to the ground. I had a chat with a dispensing chemist on the matter, and we decided to experiment with a solution for feeding the bees. We did not cover the combs over with extra material, having only a clean calico quilt and a piece of clean sacking. One hive of Italians had dwindled from eight combs to three. However, within a fortnight I saw a very marked improvement, and am pleased to say that all my colonies are well and doing all right up to the present; and, like Mr. Rollins, I am waiting to see the winter through before putting my experiences before bee-keepers and the public in general.

I may state that last week we had a day or two when the sun came out for a few hours, and my bees that had been affected were the first on the alighting boards. Also I noted that during October on fine days, when possible, the bees at the hives which had been treated were bringing home pollen. They were wintered down about the beginning of this month, and I have ceased the treatment now for over a week, and shall not continue until the brighter days of spring come round again, as a test of its permanency. I may state I have been a bee-keeper some years both in the South and West of England, but have never had "Isle of Wight" disease in my apiary before.—F. G. WARD.

ECHOES FROM THE HIVES.

MID-BUCKS.

I am sorry to say that bee-keepers in this district have lost nearly all their bees through "Isle of Wight" disease, and as a consequence we had to close down our association in the spring. Others have lost their bees through the attacks of wasps. At an apiary close by there were six stocks of bees—and two wasp nests, which were allowed to live all summer. I am sorry to say the apiary is not well looked after, but the owner was not a member of our association. I am hoping to hear from the secretary of our association to say that it is starting again.—A. E. WARREN, Bletchley.

WISBECH AND DISTRICT SEASON, 1915.

This has been a fairly good season as far as honey is concerned. Situated as we are in the midst of fruit orchards and strawberry plantations, the fine weather in the early spring was splendid for the bees. The "Isle of Wight" disease has caused great loss in some apiaries. One bee-keeper told me he has lost about fifteen of his thirty stocks. Another who keeps fifty to sixty stocks tells me the disease has played havoc with his bees. Last autumn he bought £12 worth and lost them all. This man works at a great disadvantage, having hives in different places within a radius of fifteen miles. He pays so much per hive; has three to six at each place. He is an engineer by trade, and has kept bees in this district more than twenty years. He has converted an old-fashioned motor-car into a kind of carrier with a platform in front, on which he can carry three complete hives at once. With this motor he also collects the full supers in the honey season and returns the empty ones. Another

apiarist with about twelve hives says, so far he has lost no bees with disease; he seems to get good returns from all his hives, some yielding 200 lbs. per hive. This man I consider one of the most up-to-date bee-keepers in this district, even having an observation hive in his bedroom, with entrance under the window sill, so that he can study the bees.

Several of the large fruit growers in this district have started keeping bees; some have ten to twenty hives in different parts of their gardens. Honey gathering seems to be only a secondary consideration with them; they find larger crops and more perfect fruit in the orchards where the bees are placed.—FRANK COE, Wisbech.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith There is no fee for answering questions.

W. W. SEALE (Weybridge).—*Storing Brood Combs Full of Honey and Pollen.*—Do exactly as you would with sections. Keep them in a dry place, free from dust, where the temperature is fairly even at about 40 deg. or 50 deg. Fahr.

F. N. HARMER (Rugby).—Write to Mr. G. Ingerthorpe, Knowle, the Secretary of the Warwickshire B.K.A.

Honey Sample.

J. A. HANBY (Bedale).—The honey arrived before your letter. It is a good medium honey from fruit bloom.

Suspected Disease.

W. S. S. (Palmers Green).—The bees have died from "Isle of Wight" disease.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

5 CWT. finest quality honey, 70s. per cwt., on rail, in 56lb. tins.—C. SPRATT, Meadow Farm, Wetheringsett, Stowmarket, Suffolk. v 76

WANTED, pure beeswax; sample and lowest price. — HUTCHINSON, 22, King Street, Leek. v 75

FOR sale, six 28lb. tins of splendid granulated honey, price 60s. cwt.; sample 2d.—WM. HOLLAND, Swannington, Norwich. v 74

FOR sale, "British Bee Journals," from July 23rd, 1903, to present date, only one missing; 10s. the lot, bargain.—J. CUNNINGHAM, Stetchworth, near Newmarket, Cambs. v 73

WANTED, 28lbs. secondhand honey tins; cash. —ROWE, 6, King's-road, Cardiff. v 71

TWENTY exceptionally well made W.B.C. hives, two lifts, painted, 10s. each; empty section racks, 1s. 3d. each; two, one dozen travelling boxes, 2s. each. Illness compels sale.—OWNER, c/o BEE JOURNAL, 23, Bedford-street, W.C.

SOFT BEE CANDY, medicated or plain, 1lb. glass top boxes, 7d.; postage, 4d.; 2lb., 1s. 2d.; postage, 5d.; reduction for 7lb. and over.—Address "SUGAR," "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, cloth-bound copy "Bee-Keepers' Record." Vol. 7, year 1889.—"HERROD-HEMPSALL," "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, HONEY in bulk. Sample and price. — HISCOCK, 129, Oxford-road, Reading. v 65

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, good lantern slides on poultry-keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat f/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print below a further list of names to those sent in. We shall be pleased to have other names as soon as possible.

Lieut.-Commander Eyres Monsell, M.P., Dumbleton Hall, Evesham—R.N.

Capt. G. Minty, Schoolhouse, Inverkeithney, Turriff.—2/6 Gordon Highlanders.

Lieut. Knight-Coutts, Burford Road, Evesham—R.F.A.

Lieut. Hyatt, Great Comberton, Pershore—Worcesters.

Lieut. M. Warner, Sedgeberrow, Evesham—Worcesters.

Lieut. C. Courtney Lord, The Drive, Orpington—R.A.M.C.

2nd Lieut. A. Hutcheon, Lower Cotburn, Turriff—1/5th Gordon Highlanders.

Trooper A. Bayliss, Worcester Road, Evesham—Worcestershire Yeomanry.

Rev. A. G. Catto, The Manse, Inverkeithney, Turriff.—now Pte. A. G. Catto, R.A.M.C.

Pte. Cyril C. Tunmer, 12, Crown Lane, Maldon, Essex—R.A.M.C.

Pte. W. G. Tunmer, 12, Crown Lane, Maldon, Essex—54th East Anglian Div. Cyclists Company.

Pte. F. N. Colebrook, La Maisonette, Gorey, Jersey, C.I.—2nd Batt. Royal Jersey L.I.

Pte. Roberts, Badsey, Evesham—8th Worcesters.

Pte. Milton, Condicote, Broadway, Evesham—8th Worcesters.

Pte. Perry, Norton, Evesham—8th Worcesters.

Pte. Stanley, Fampton, Evesham—8th Worcesters.

Pte. Julian E. Lockwood, Model Apiary, Hunstanton North, Norfolk. — 1/5th Norfolks (wounded).

Pte. S. Stringer, Garden Cottage, 87, Church Road, Altofts.—A.S.C.

Pte. A. D. Bennett, 8, Albert Terrace, Laird, Plymouth.—R.A.M.C.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. Herrod-Hempsall,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount already received ...	137 lbs.
"Anonymous"	4 ,,
Mr. A. L. C. Fell	8 ,,
Mr. Richard Ling	14 ,,
Total	163 lbs.

BELGIAN RELIEF FUND.

	s.	d.
Amount already received	5	10
Cpl. H. W. Round, R.E.	2	6
	8	4

REMITTANCES.

Since the new postal regulations came into force the bulk of small remittances have been sent in stamps. We do not object to this for sums up to 2s., but when stamps are sent, please send *halfpenny* ones.

The postage on letters is now one penny for *one* ounce instead of *four* ounces. Care should be taken that postage is fully paid, or the letters may be refused.

OBITUARY NOTICE.

THE LATE RICHARD BROWN.

As briefly stated last week we are sorry to have to chronicle the death of another veteran of the craft, Mr. R. Brown, of Somersham. Born sixty-three years ago, he very early took an interest in all things appertaining to country life.

Of a genial nature and with an unlimited fund of humour, he was the best of companions under all conditions. Nothing damped his spirit, and when the most trying conditions prevailed he would say, "Never mind, boy, it might be much worse. Stick to it, and

THE LATE MR. R. BROWN.

things will brighten up." No one could be long depressed in his company.

He was a most successful fruit-grower, and attributed his success to the bees which he kept in his large fruit orchards.

A man of many parts, he excelled in the production of osiers in his various "holts." These were woven into baskets of all kinds in his factory. He also lectured on bees for the Hunts County Council, and was an inspector of gooseberry mildew under the Board of Agriculture.

The beauties of Nature always appealed to him, and the name of his residence, "Flora House," was richly deserved on account of the blaze of flowers grown in the garden.

He was one of the founders and a staunch supporter of the Hunts Bee-Keepers' Association.

A prominent Freemason, he was assiduous in carrying out the duties of the craft, and the *Great Architect of the Universe* has taken home to his everlasting temple no more faithful servant than Brother Brown.

His great *forte* was the production of comb honey, and both his home and out apiaries were situated in the best districts for this purpose. A successful exhibitor for many years, he took reverses with the same good nature that he did his successes. He also officiated as judge on many occasions. His awards were impartial and fair, so that they were never questioned by exhibitors.

He was probably at his best when attending the Royal Show. As a raconteur of good stories—among which were many of his own experiences amongst his own and other people's bees, especially when driving bees in the fen district—he had no equal. The writer's experience of him at The Royal dates from 1897, at Manchester, when he and the late John Howard kept the whole staff of the department in continuous roars of laughter with their jokes and stories.

John Howard, C. N. White, and R. Brown were bosom friends, who have now all joined the great majority.

A staunch supporter of the British Bee-Keepers' Association, and of the BEE JOURNAL and RECORD, he was untiring in his efforts for their welfare.

Two years ago he had a serious illness, but recovered sufficiently to attend the Royal Show at Shrewsbury. He had a relapse in the early part of this year, and was unable to attend at Nottingham—the first Royal Show he had missed for a number of years—where his exhibits, staged by his son, Edgar, were in the forefront of the prize list. Lying on a bed of pain, often unconscious through his suffering, his constant inquiry during that week was, "How is the Royal doing?"

He lingered on, suffering excruciating pain without complaint, until November 22nd, when he passed peacefully to his rest.

There will be a vacant seat round the camp fire at future "Royals." No more will the wit and humour of "Dick," as he loved to be known and called by his chums, help to pass away the hours till turning-in time. Nor will his cheery voice be heard calling us from bed to breakfast, to prepare which he had risen with the lark.

The writer has lost a true and tried friend, and we are sure that the sympathy of all bee-keepers will go out to his widow and family left to mourn his loss.

Bosh (p. 268).—There is a good deal of Bosch talked about the present war by amateur tacticians, and though the device is by no means new, the suggestion that Apis Dorsata should join our Flying Corps is not within the range of practical warfare. These brutes are not to be handled like the domestic variety, and the danger to our own lives would seem to equal that to the enemy. Horses could hardly be employed near them, though neutral mules might be safe on account of their own asséd proportions. Probably bumble bees (*Bombus militia*) would be the most suitable for the purpose.

Sum and Note (p. 278).—Mr. Campbell pleads for statistics, but unless these were carefully tabulated and correlated they would be of little value. The simple noting of dates would be a mere nothing, and the facts that swarms issued then, or that the weather was such, would hardly help us to alter either. To be of use such statistics should be synchronised to a time base, say the date of the local clover flow, and such side data would have to be recorded, as the race of bees, size and type of hive, aspect of apiary, character of district, rainfall, honey crop, increase reckoned after wintering, and other matters which would no doubt occur upon consideration. Generally speaking, we already know the main qualities of bees, hives, and honey plants, and the effect of weather and swarming upon results. But there would appear to be a field for enquiry into the respective vitality of old and young queen mothers, and there is still something to be done towards intelligent forecasting of crops under average weather conditions. I make these suggestions in a spirit of helpful criticism, as unless the enquiry were upon some such lines, I fear it would amount to—in the Yorkshire phrase—"summat and nowt."

Bees and Birds (p. 278).—I came across an interesting case this spring in the apiary of Mr. L. H. Smales, the Hon. Secretary of the Whitby and N.E. Yorks. B.K.A. Upon removing the roof of a hive, I was astonished to find a beautiful thick bedspread of moss, entirely covering the usual quilt. In the centre of this was a tiny tightly-woven pit from which protruded half-a-dozen long, skinny necks waving enormous mouths in blind eagerness. When we had quietly withdrawn, an excited Great Tit popped through the ventilation hole to hear what her brood had to say about us. Needless to say, we did not disturb this ideal arrangement of incubation and convenient food supply, and Mr. Smales later on took a photograph of the happy family.

Remedies for Stings (p. 281).—There is surely an error in the proportions given of the crystallised carbolic remedy, and if used as advised it would result in a serious burn. The intention is no doubt to dilute the solution thus obtained to safe proportions, but it is inadvisable to use this powerful poison at all for such a purpose. Oil of citronella will be found a useful deterrent to the attacks of midges, but it is not very agreeable, the smell being that of the old-fashioned hair pomade. Oil of lavender will be found almost as efficient, and a great deal more pleasant.

BLURT FROM A SCRATCHY PEN.

THE BUSINESS OF HONEY PRODUCING.

From the sidelights of the correspondence in the BEE JOURNAL, there is but little of any value to be gathered as to the reasons of the failure of the British Honey Company. There was not much enthusiasm shown by the crowd as to its success. This apathy was, as we shall see, one of the reasons of failure. Wishing to get to the very root of the affair, I have made it my business to enquire from some of the actors in these scenes. I may mention that the information was very willingly given; but, as I neglected to ask permission to mention the names of my informants, I do not at the moment feel justified in making them public.

From these sources I gather that the company was started to introduce, and dispose of, *British Honey only*; and then because it was found impossible to get a *regular* supply of the native article, the business could not be carried on. Power, indeed, was taken in the formation of the company to enable it to deal in foreign honey if necessary, but it is to the honour of the directors that they acted in the integrity of the spirit of the purpose for which the company was formed.

The supply then being so small and the qualities so various, it was found impossible to send to would-be regular customers a similar honey every time—a necessity of the first importance. The attempt was made to collect these small lots, to sort them into something like different grades, and to redistribute them; but the cost was too much. It consumed all possible profits. In those days the owners of considerable numbers of colonies were relatively few. If there had been in existence a sufficient number who owned, say, 50 to 200 stocks, by

co-operation this grading might have been worked, but it is self-evident that to get two or three hundredweights of honey from a dozen different neighbours, sampled, graded, and worked, would take all the gilt off the gingerbread. Again, another difficulty was the great loss on sections sent by rail. Even at the present day this is one of the great troubles; how, then, before appliances were so well thought out must it have been intensified? There are well-recorded instances of sections being sent, even in quantities, the packers of which, I suppose, trusted to luck that they would arrive safely; the consequence being, of course, that on arrival they had to be thrown on the dust heap. This is extremely unpleasant both for the sender and the receiver. With the recent books we have had published as to the general manipulation of honey, this should occur now but seldom, if ever.

Again, another informant tells me that one great conducive cause of the failure was (to put it very plainly and bluntly) the want of honesty on the part of bee-keepers. All their choice sections and their best honey they found purchasers for in their own locality; but indifferent sections and low-grade honey was good enough to dump on the Honey Company. This would be fatal to any business. I note in one of the reports of the meetings that £1,000 worth of honey had been bought in the year 1885. It would be valuable evidence to know how much of this was really good class honey, and how much of it was rubbish. There is always a market for even black honey—at a price it is suitable for shoe polish; but to have your stock weighted with inferior merchandise means a very rapid loss of reputation. This is true of most things, more especially with honey. If British honey is to hold its reputation it must be by producing and selling only a good article. There is any amount of good foreign honey brought into the market (as witness the monthly returns in the BEE JOURNAL) and sold at a competitive price. British honey commands its superior price by its quality, and by its quality *only* can it therefore hold its position.

Seeing, therefore, that success in the venture they had undertaken was not possible, the directors of the company took the only course open to them, and voluntarily wound it up, all debts being paid in full, and a large part of the capital returned to the shareholders. Whether another company could be started now successfully, with the experience of past failings to teach avoidance of mistakes, and with all that we have learnt in thirty years to help us, is a matter for serious consideration.—J. SMALLWOOD.

A DORSET YARN.

When at Lytchett Matravers last week I met Mr. Jenner, of the "Rose and Crown Inn." He had a sad tale to tell of the ravages of disease among his stocks. He has been noted for his apiary and the quality of his honey, and has always followed the newest methods of management; his sections have been of the finest quality, but his losses have been great. He says it has been the same with all his neighbours in Higher Lytchett. He asked: "What can be done to stamp it out? I read all I can about it." I asked Mr. Jenner what he thought of the "Pea-flour" cure for the disease. His answer was he had tried it, but it was of no corrective value toward stamping it out. The reason of this query was this: In Dorset Mr. Tilley, who is a veteran bee-keeper and lecturer, has written copiously in the local paper. I have had 24 extracts sent me from the *Dorset County Chronicle*, all treating on this subject—"Pollen hunger," he terms it. All that I have yet read of them shows how carefully he has followed this scourge; and his remedy, to take out the stale pollen and use Pea-flour as a substitute.

The teaching in the BEE JOURNAL, to take out old combs and introduce some new each year, will do away with a lot of stale pollen—if that is a cause of disease. Mr. Tilley is so convinced of it that I was sorry to hear Mr. Jenner did not find Pea-flour a success.

He lives in a neighbourhood of small-holders—a village of hills and dales on the borders of a heather neighbourhood, with plenty of high trees and woods. Bees have hitherto done wonderfully. Such a wealth of flowers the whole year round; even in winter the yellow gorse is to be seen in bloom. This is one of the places in Dorset where the snowdrop grows in great luxuriance at the foot of gigantic limes. They are often out early in the new year in the valley where the old church and manor house stand. One other churchyard in Dorset I have seen where beneath the lilacs, as well as the forest trees, the snowdrops regularly whiten the ground in their season. In this village of smallholders there seems to be such sturdy self-reliance and self-esteem it is a real pleasure to mix with them. With their cows, pigs, poultry, and bees they seem at peace with all the world, though their young men have gone to fight their country's battles in other lands. This summer many have had to work 10 and 16 hours a day. Honey in this neighbourhood is still sought after at remunerative prices.—J. J. KETTLE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9205] On page 427 (9202) Mr. Pearman raises some very interesting points. One at least I will endeavour to answer, namely, "Can anyone with experience say how soon bee paralysis will show itself after it has been known to have been introduced into the hive?"

I think he will give me the credit of having the necessary qualifications, *i.e.*, experience. Therefore, I wish to say that I have never known a case to develop in less than four months. Usually, it takes a year, and often longer.

To prove this it has been demonstrated by hiving swarms (known to be absolutely healthy) on to combs that diseased bees have previously died on.

Secondly, by making an artificial swarm of a healthy stock and giving it diseased combs.

In the third place, by making an artificial swarm of an infected stock showing crawlers, destroying the swarm, and watching results on the old stock which has young bees and eventually a young queen. In this last case it is surprising how long the disease is in showing itself again.

I therefore ask my friend to look back and see if he cannot find something, even the slightest clue, which he has overlooked in placing the period as low as three weeks, remembering that this disease mostly develops in the late summer and autumn.

He also opens up another important matter which I think should be cleared up right away.

It is quite easy, after the expert has paid us a visit, and disease appears shortly afterwards, to assume the infection took place at that time.

This may be possible in some cases where experts are engaged for cheapness, regardless of quality, but I am sure good experts don't do this.

Personally, I regard the carbolic cloth as a stinking nuisance which I detest, and therefore never use. Perhaps it will interest Mr. Pearman to know that I have recently carried out a tour, inspecting over 500 apiaries without even carrying a tool at all, relying solely on the bee-keepers for tools. In case these were not available I smoked a cigarette.

I also make a point of never touching stocks in apiaries where crawlers are to be seen, taking great care that the crawlers don't crawl on to my person, and thus get a free ride to the next place.

This certainly is a sure way in which bee-keepers, let alone experts, may carry infection to other places.—JOSEPH PRICE, Haden Hill, Old Hill, Staffs.

BLACKS *v.* ITALIANS.

[9206] It may be interesting to record my experiences: I started bee-keeping in 1911 with two skeps purchased locally; these quickly went under—apparent reason, wasps. In 1912 I started again, with three skeps, also procured locally, these reached winter safely, but to my great sorrow succumbed to some mysterious disease—later found to be "Isle of Wight" trouble. In 1913 I rallied again with bees brought from a distance. These did well and increased to nine stocks by winter. The spring of 1914 saw me with a grand lot of bees, and all my bee troubles over (so I thought). In July, however, there were crawlers from two stocks, but by autumn I had increased to twenty-seven stocks, among these were one lot of yellow bees; how I got them I cannot be certain. When in the spring of 1915 I went the round of the hives, to my disgust I found three lots alive, one of which, of course, were Italians; these were soon in a roaring condition, and gave me some early fruit blossom sections; but as I left home for a time during the honey flow, I unfortunately lost the first swarm, but the old stock I increased by swarms and nuclei to five lots, one of which I discovered accidentally. This had made its home under the floor board of a hive and built five or six combs. Of my remaining two stocks of blacks one did remarkably well, giving me nearly 100 sections, and increasing to three lots by swarming; the other did no good, only dallying along, just keeping themselves going. Now with winter fast approaching I find them dead, and the other blacks showing the usual signs of the old trouble; my "yellows" are, to the best of my knowledge, still healthy in spite of all, and I pin my faith on them for 1916. I may add that I have spared myself no trouble in trying to combat the dreaded "Isle of Wight" disease, using drugs, etc., but the so-called remedies are, I am convinced, worse than useless, as they only prolong the struggle against odds, giving freer scope for the infection to spread amongst bees, which otherwise might

escape. In conclusion, I add my support in favour of the insect with the bright yellow jacket, and say, "Away with the Blacks." — FREDK. CARTER, Baldon, Oxford.

ECHOES FROM THE HIVES.

NORTH NORFOLK.

In this Zeppelin-infested district 1915 has been a very fair honey year, but the later honey was spoilt with honey-dew. My bees average 5½ stones per hive, including 2 gross of saleable sections, which I think is very good. I have not heard of any "Isle of Wight" disease within 20 miles, and trust it will not come any nearer. I have 31 stocks all packed down for the winter with no sign of disease. The white clover was very little visited by bees, the weather being too wet, it did not secrete the nectar. The bulk of the honey was gathered the first two weeks in June. I had to feed a few stocks with about 10 to 15 lbs. of syrup to carry them through till spring, and was very lucky to get 3 cwt. of cane sugar before the rise in price.—RICHARD LING, Briston, Melton Constable.

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith There is no fee for answering questions.

"CRESCENT" (Woking).—*Air Bubbles in Heather Honey.*—These are always present in heather honey. It is so gelatinous that the bubbles cannot rise. The only method by which you can clear the honey is to heat it, and, in our opinion, to heat heather honey is to spoil it.

L. ILLINGWORTH (Southampton).—*Charge for Hive Stand.*—The usual charge is 1s. per hive, but we think there should be a reduction for a number—say, 10s. per year for a dozen.

H. J. BOVELL (St. Helena).—(1) *Uniting Swarm to Queenless Stock.*—Hive the swarm in the usual way, preferably on drawn-out combs, standing the hive—which may be a "makeshift"—by the side of the queenless stock. In five or six days remove all combs from each lot not covered by bees, and cage the queen. Separate the combs in the queenless stock, and dust the bees thoroughly with flour. Lift the combs from the other lot, dusting the bees on each one with flour, and interspace with those in the queenless hive. When all the combs are moved, close them up and remove the "makeshift" hive. The Queen may be released in 24 hours.

(2) *Laying Worker.*—Carry the brood box as far away as possible from the stand, and having spread a sheet or piece of sacking on the ground, shake *every bee* on to it. Replace the box and combs on the stand, and all but a few bees will return. These few should be destroyed, as the laying worker will probably be among them. You may then give the bees a comb of brood and eggs, as suggested. (3) That method will answer, but the one given above is preferable.

Honey Samples.

"CROWN" (Essex).—The honey is mainly from clover, with a little from fruit bloom and beans. Worth 60s. to 70s. per cwt.

ANON. (Bexhill).—The light honey is from clover and fruit. The dark from clover, fruit, and beans. The former worth 11s., and the latter 10s. per dozen jars.

H. EGGAR (Chard).—There is no honey-dew in samples; the appearance of the cappings is caused by the honey, which is dark in colour, touching them. Honey-dew is not even good for winter stores for bees. Bro. Columban's recipe for honey candy was reprinted in the "B.B.J." for Oct. 29th, 1914. Price 1½d. from this office.

Suspected Disease.

G. (Swansea), REV. T. W. T. (Bridgnorth), "NOVICE" (Peterboro'), J. M. CHAMBERS (Walton-on-Thames). — The bees have died from "Isle of Wight" disease.

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Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print below a further list of names to those sent in. We shall be pleased to have other names as soon as possible.

Capt. W. G. Coates, South Kilworth House, Rugby—18th London Battery R.F.A.

Lieut. Bernard B. Wright, The Hermitage, Thrapston, Northants.—A.S.C.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. Herrod-Hempsall,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount received	163 lbs.
Mr. R. Robson	7½ lbs.
Total ...	170½ lbs.

BELGIAN RELIEF FUND.

	s.	d.
Amount received	8	4
A. B.	1	0
Total ...	9	4

REMITTANCES.

Since the new postal regulations came into force the bulk of small remittances have been sent in stamps. We do not object to this for sums up to 2s., but when stamps are sent, please send *half-penny ones*. We can always use two half-penny stamps when a penny stamp is required, but we cannot split a penny stamp into two half-penny ones.

May we also remind correspondents that the postage on letters is now one penny for *one* ounce instead of *four* ounces. Care should be taken that postage is fully paid, or the letters may be refused.

Extracts and Comments.

By D. M. Macdonald, Banff.

Honey Day.—An attempt has been made by the American bee papers to make 25th November observed as a *Honey Day*. The subject was first mooted by Mr. Williams, of Redkey, Indiana, in his bee paper, *The Booster*, which he started some time ago with the object of booming honey. In the States, he says, they have Christmas Day, Thanksgiving Day, Arbour Day, and many others. Why not have Honey Day? In view of the many blessings conferred on us by our little friend the bee it is fitting that we pause and pay a tribute to her. Let us all on 25th November eat a little honey in the spirit and manner of a thank-offering. *The Bee-keepers' Review* gives the movement its support and blessing, and hopes some benefit may result, and that some gain in the amount of honey consumed in each locality will accrue. *Gleanings* thinks the idea a good one, as it will draw attention locally to the value and importance of this delicious natural sweet. By the way, the issue of this paper for 1st October is wholly devoted to honey, and especially the use of honey in cooking. The issue is a most interesting one, and I will deal with it more fully in an early issue of the Journal.

Queens of Quality.—Mr. Townsend, Editor of *Review*, deals with this subject from an interesting point of view. "Among our eleven hundred colonies of

bees worked for extracted honey a dozen or so far outstrip all others in the quality of honey gathered. It is too bad that commercial queen-breeders could not have such queens as breeders. No queen-breeders have such an opportunity to test out the honey-gathering qualities as this. If generation after generation of such breeding stock were used good results would most surely be obtained." Right here, as the Americans say, is a great weakness in this country—queen-breeding. Our men are simply queen-*rearers*. I think I made a somewhat similar observation years ago, when the assertion was disputed by a single queen-breeder. Discussing the subject recently with one who devotes his chief attention to rearing bees and queens, he admitted that the call for nuclei and queens was so great that he had to trust to chance a good deal as to how queens would turn out. He would issue a guarantee that they were from original good stock, were prolific, but as to their honey-gathering qualities he had not time to test. He himself did not count on the honey crop, as he had so often to deplete stocks to make up lots as orders came in that he seldom had strong colonies. The above idea should appeal to him strongly.

A New Extractor.—Gleanings tells us of a new-style, bilateral, multiple honey extractor, apparently of French origin. "You put into the machine a single comb, or any number up to twenty, pull down the cover, turn the crank for a time—and there you are. Both sides are emptied without any reversing, automatic or otherwise, with no crushing of cells against wire cloth, and no danger of breaking combs out of frames. I am almost constrained to re-echo my prototype's exclamation—"Pro-di-gi-ous!"

Shifting Bees.—When shifted from one district to another do bees benefit? Do they, in fact, take on a new lease of energy and activity? The Australian bee-keepers take the affirmative view. D. M. Morgan, an extensive apiarist, read a paper on the subject at the recent Conference, in which he says: "My experience is that bees benefit by a change. Fresh places and different kinds of flora work wonders. There is a 'go' in the bees you have brought from some other locality when they are placed alongside your own bees on the old stand. Is it the new surroundings? It is the change of places, and I have proved it over and over again. Moving apiaries from one part of the State to another is not only good for the bees, but also for the pocket of the bee-keeper."

Smoke Method.—"For some reason," says Mr. Root, "the smoke method has not proven to be as successful this year as last. In our own apiaries we have gone back to the cage method, which, all things considered, seems to be 'the most reliable.'"

Clarifying Honey.—The Americans have been rendering dark honey clear by passing such honey as buckwheat through bone char, and they have secured a product as clear as crystal. The cost, however, seems rather prohibitive, and nothing is said about the flavour.

Heavy Winter Losses.—The Department of Apiculture, Washington, estimates that bee-keepers lose at least a tenth of their colonies every winter, but Dr. Phillips thinks these could be reduced to one per cent. He explains why weak colonies die out. "The surface of a spherical cluster is proportionate to the square of the diameter, while the volume is proportionate to the cube of the diameter. It follows that a large colony cluster has a relatively smaller surface for radiation of heat than a small one." Therefore the weaker cluster must do more work in proportion to its size to keep up the proper temperature.

A DORSET YARN.

The time for planting fruit trees is slipping by. Those bee farmers who have room to plant pears and apples should plant lines of those that are self-fertile alternately with those that are self-sterile. I was in the gardens of the Knoll (H. J. Mills, Esq.) on Friday. There, Cox's Orange Pippin apple were planted alternately with those that are self-fertile. They were at one time in one group, and bore only a few fruits; now they produce fruit of the finest quality, which bears out what Mr. Cowan's small pamphlet teaches. Many apples, without the aid of bees, would only have a lot of little clusters of fruit without seed in them. It is the seed in them that makes the pulpy envelope round it swell into fruit of the very finest rank. Some of the finest apples, like Annie Elizabeth, Allington, Bismarck, Bramley, Bath Lanes, Prince Albert, J. L. Grieve, and Worcester Pearmain, are all of the same class—self-sterile; others, like Quarrenden, Sudeley and Ribston, have plenty of pollen if mixed with the others in planting for cross pollination. I have this year seen a good many trees that were anything but a success. The growers put it down to the dry summer, but I am doubtful if that was wholly the cause. There were no bees very near them. Quarrenden trees, when in bloom, seem to have a far greater attraction for bees than do Wellingtons and Northern Greening. I

am not sure if it is because there is more pollen in the one or more honey. What is certain, the hum of bees is much more in evidence among the Quarrendens and Lady Sudeley. Many fruit-growers plant the best selling varieties like Cox's Orange Pippin, Bramley, Beauty of Bath, &c. These are the very worst for self-pollination.

It is just the same with pears. A friend of mine has one of the largest pear trees in Dorset, but he never has more than six pears in any year. In the local papers you will see the weight of these enormous pears. I have advised him to plant Angoulême, Le Lectièr, and Winter Nelis, as these are more frequented by bees than are Doyenne de Comice, Williams, Pitmastons, Beurre Diel, Beurre Clargeau, Louise Bonne of Jersey, Clapp's Favourite, &c. These varieties should have Winter Nelis and Duchesse d'Angoulême liberally planted between them so that bees would carry the pollen from tree to tree and so fertilise the whole. Both apples and pears must have all the seeds within them fertile, or the fruit is not a good shape but somewhat one-sided. The larger the pips within the more the luscious pulp that envelopes it swells. Nature looks for the seed, man wants the soft, pulpy envelope. When a boy in the large gardens of the wealthy, I first learned this lesson. Every year Duchesse d'Angoulême fruited regularly. Winter Nelis had huge crops when many other choice pears in other quarters of the orchard bore very light crops, although they bloomed beautifully.

I have read somewhere that the Egyptians always ask Allah to bless the date palms, and that they always pray for their fertility. They give thanks for the great clusters of fruit. We might thank the great God who rules the universe, for the bees. Without them many of the choicest fruits would soon be things of the past.

I do not know if bees fertilise the date palm blossoms. They belong to that class of plants which have the pollen (or male) flowers on one tree and the fruit (or female) flowers on another; just the same as do the salix (willow) family in this country. One of my sons has been soldiering in Egypt with the Dorset Yeomanry. If his life is spared and he comes home, we shall hear of some of the wonders of that ancient empire. Letters give such a brief account of what one sees. He was there last winter and early summer. Landed in Gallipoli in August, he took part in the charge of Hill 70, which caught fire afterwards; every officer killed or wounded the next day after landing. He is one of the fifty left of the gallant band of Dorset yeomen. His last letter tells of a month in the first line trenches. He is now at a rest camp, and will be back in the trenches to spend his Christmas Day. "Not enough of us" is the one theme in all his letters home. When will England realise that our existence as a great Power is in the balance, and depends on these few fighting units in all parts of the world? This village of 900 inhabitants has sent over 100 to swell the ranks of the new armies since the war broke out. Several have been wounded. Five will never again see the fertile valleys of Dorset. In the words of the old book: "They died that we might live."—J. J. KETTLE.

WITH THE BEES AT THE FRONT.

By Sergt. A. G. Atwell.

(Continued from page 426.)

Mr. Kettle's correction (No. 9201) referring to Maubeuge is certainly quite right, and I was in error in referring to that place as a village. But not having at all times made full entries and descriptions of places in my diary, and it being over twelve months ago that these events happened, it is often difficult, after the many and varied experiences which I have been through, to give a correct description of all of them, although I must certainly be more careful in the future. However, my readers may rest assured that should I make any error in the description of places, I shall make none with my experiences with the bees, as these stand out as vividly as though they happened yesterday, and, of course, form the most important part of the story. However, I thank our friend for his correction, and shall always be pleased to hear of any more mistakes I may be liable to make under the many difficulties in which I write. Continuing my story, we found ourselves, after a day of continuous fighting, in the little village of Chivvy Boulne, Here we stayed for a week, my regiment helping to hold a ridge of hills just outside the village. The place was under a hurricane of shell fire both day and night, and I was kept so busy attending to the continual stream of wounded (I was employed in the first-aid dressing station at that time) that I had no time while in this place to go exploring for bee-hives, although I have not the slightest doubt that there were plenty about. There is one little story which I might tell of this place, which I am sure will touch the hearts of all bee-keepers. Just opposite our dressing station lived an old lady of some seventy years or more, her husband was dead, her three sons were

at the war, her married daughter lived miles away, and so this old lady—too old to leave her native village—was left to her fate. Often when I had a minute to spare during the day I would cross over, and she was always delighted to see me; she would open her little Bible, which she always carried with her, then amidst the thunder of the guns and bursting shells (any one of which might demolish the house at any moment), the old lady would turn to a picture of the Virgin Mary, and pointing above would exclaim, "La Saint Monsieur, La Saint." We had to evacuate the place after a week there, and withdraw to another village called Vendresse. But the old lady, together with a few other old people, stayed behind. I do not know what happened when the Germans came. Vendresse, a little larger and more modern than the last place, gave me many interesting experiences connected with bees. We had been here no longer than a day before one of the stretcher bearers (who had been exploring some of the vacated houses and gardens) came rushing up to me, and vigorously rubbing his nose, which was already showing signs of an unseen aerial attack, shouted out in great excitement: "Bees! Bees!" Two or three minutes' walk brought us to the garden, which contained a little apiary of some half-dozen skeps, of the same size and shape as the one I illustrated a few weeks ago. One skep was lying on the ground with a cloud of angry bees flying around. This one, my friend told me, he was carrying away when the bees gently reminded him that it wasn't quite such an easy task as he expected, and forced him to drop them, and beat as hasty a retreat as any he had yet experienced during the war.

(To be continued.)

[We had the pleasure of a visit from Sergt. Atwell a few days ago when on his way back to France after a few days' leave. We are sure our readers will be pleased to hear he was in excellent health. He had some interesting tales to tell, but as some of them will probably be narrated in his articles we will not anticipate them. We trust he may be spared to return safe and sound to his home and the bees.—EDS.]

NORTHLEACH.

SOME MEMORIES OF BY-GONE DAYS.

The very name suggests the quaint and remote Cotswold town that it is. Picturesquely situated in a hollow of the hills, the first you see of Northleach is a wide circle of grey roofs, out of which the square church tower rises boldly and distinctly against a dark background of woods beyond.

Northleach is a place that has seen better times, and was more frequently heard of in the coaching days than now. Its sleepiness is suggestive of decadence, and the nearest station, six miles away, leaves it an almost forgotten spot by the busy world.

Yet there are those who seek it still; and these do so purposely for the invigorating air and the enchantment that lingers over this ancient town, and savours of the "good old days" which we like to remember. As one approaches down the hillside the town unfolds. From between the houses narrow side-streets appear at acute angles here and there, and finally lead into what used to be the famous Oxford to Gloucester road that divides Northleach exactly through its centre. With a prison at one end, and the workhouse at the other, this fair spot has anything but a pleasing approach. Happily the natives have a complacent regard for both, and with few exceptions manage to live out their allotted span without more than a visit of inspection to either. Certain it is that with two such substantial institutions no Cotswold town affords better facilities of whiling away one's latter years in peace and quietness.

The front of the prison, with the jailer's pretty home and well-kept flower garden, is pleasantly inviting; but at the rear, all round, a high, grey wall rises out of the marsh, which in wintertime looks desolate in the extreme. It almost hides from view the long, narrow slits which serve as windows, through which the keen wind would howl and chill to the marrow any felon there confined in days gone by, when sheep-stealing and robberies were rife in country districts. Northleach is in the heart of a sheep-feeding country. All round the rolling downs stretch up and away for miles. Stone walls divide them roughly into fields of pasture and ploughed land.

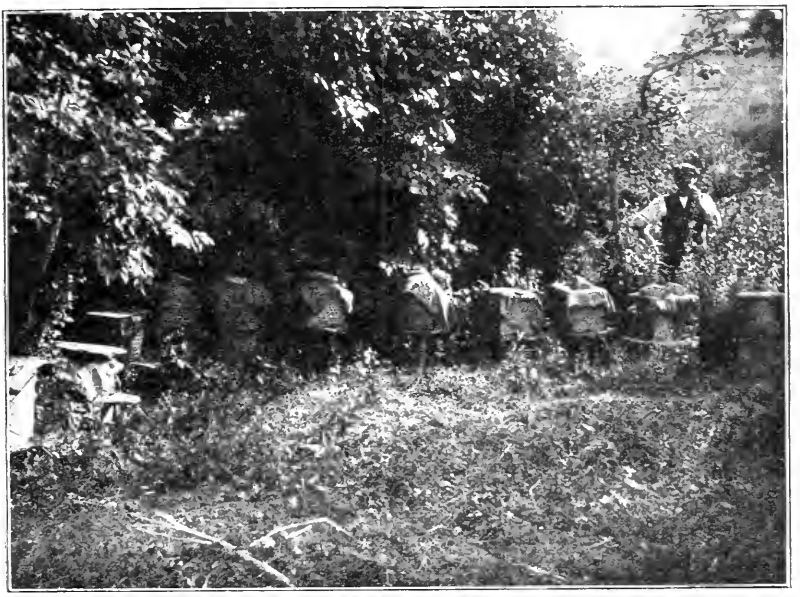
In the hollows tiny hamlets nestle, through which the stream flows in and out:—

"And chiefly from the brook that loves
to purl o'er matted cress and ribbed sand.
Pour round mine ears the livelong bleat
Of the thick fleeced sheep from wattled folds upon the ridged wolds."

This, too, is a rare country for honey of quality. The oolitish brash produces sainfoin at its very best, and all the flowers, in fact, from clover to willow-herb yield a delicious honey of unrivalled flavour. Throughout "taking up" time

the villager, with his row of straw bee-hives under the wall, would remove his "caps" of solid yellow combs of honey, and wind up the season by having driven the heaviest hives of the "flock." In a quiet way quite a snug amount is thus added to the cottager's slender income, and for his purpose the cosy bee-skep is well adapted. Years ago he used to convey his produce in the rough to the honey market at Northleach; but later years bring a change of methods, and most of it is now marketed to the neighbours round about. In winding up this little sketch I cannot do better than leave with the reader a view of a skep apiary typical of many that are still to be found in the peaceful hamlets around Northleach. On frosty nights in mid-winter the sound of the posthorn of the coach is no longer heard from over the hill, but one can imagine the animated scene in years gone by as the six horses came through the town at a gallop and drew up for the night at "Ye Olde Marlin Spike": a comfortable inn, with its spacious yard and cheery landlord.

Then out would come the lackeys with their red noses and cheerful banter: the passengers would alight and seek the log fire roaring in the parlour, while the team unhitched would soon be in comfortable quarters ready for to-morrow's journey. And very soon the hum of voices would die down, until no sound broke the stillness of the night. The moon would shed its silvery light through the latticed windows of the casement, and cast long shadows and ghostly images unnoticed and unwatched. — A. H. Bowen, Cheltenham.



SKEP APIARY NEAR NORTHLEACH.

HOMES OF THE HONEY-BEE.

We have received the following notes from Mr. L. N. Colebrook, La Maisonette, Faldonet, Gorey, Jersey, C.I. Unfortunately Mr. Colebrook, who is serving in the Army, is unable to send us a photograph of his apiary at present. Perhaps he may be able to send us one, and a further account of bee-keeping in Jersey at some future time. It is a pity there is not a Bee-Keepers' Association in the island; and we hope if an effort is made to start one it will be successful.

"Having read the experiences of other bee-keepers in the pages of the British Bee Journal, I thought I should like to write mine.

Ever since the age of eight or nine I have wished to keep bees, but was never able to start, until two years ago I found a large swarm in a tree in my garden. When I found them I had no skep or anything to take them in, so walked about one mile to borrow one.

The swarm was still there when I got home, so I managed to hive them all right, with a bit of muslin over my face and a pair of woollen socks on my hands. I kept them in the skep for three days until I had a box hive (ten bar frames)

ready. I was very successful in hiving them, although my audience prophesied that I was going to lose the lot in doing so. I must add, my grandfather, an old man of eighty-nine, was a valuable assistant in all this. This was on May 16th. On October 30th I took 111bs. of surplus honey from shallow frames.

I now have three stocks of bees, having lost one this autumn by wasps. I have taken no honey this year, but my stocks seem very strong for wintering. It is very surprising to me that many more do not keep bees in Jersey, as the climate is ideal for them, as we have such mild winters.

I am making all my own frames, supers, &c., this winter, and I hope to double my number of stocks next year. I opened my hives yesterday (November 16th) and found that the queens are still laying, and there is much sealed brood. I make my hives with double walls, and flat roofs sloping to the back. The ends of racks (for shallow frames) on which the frames rest, I cut $\frac{1}{2}$in. too low, I then take a strip of tin 2in. wide and the length of rack walls and bend to form a metal runner.

This I secure to the wood with copper tacks. The bees cannot seal the frames to this girder with propolis, thus saving a lot of trouble in examining the hives.

I live right in the midst of large orchards, so I think, given fine weather, my bees should do very well.

The spring and early summer of this year were wet and cold, so I put down my lack of surplus honey to this cause.

I should be pleased to hear from any of your readers who would be interested in the formation of a local Bee-keepers' Society.—L. N. Colebrook."

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

By J. Price.

(*Continued from page* 419.)

I have already remarked that there are two stages of this disease. Of the final stage I stated that it was hopeless to attempt a cure. What then of the earlier stage? Unfortunately, this is not always seen by the bee-keeper, who may be away from home during the daytime, and therefore cannot see the sickly bees that usually bask in the sun on the alighting-boards on a fine day, and retire inside their hives at the approach of evening, making it impossible for their owner to notice anything wrong.

Again, I think it quite possible that this first stage may not be noticed by the occasional observer, even during the daytime; in fact, in some cases it is likely that this stage cannot be seen at all. I think this very much depends on the weather at the time, and also how the disease was contracted. It is possible for one solitary bee, having been in contact with a diseased one during foraging or getting water, to bring the infection home, or it may be, as in the case of one stock robbing another, that thousands of bees get the infection at once.

I also believe that this affects the period occupied in the incubation of the disease, as it is known that some stocks will contract it and develop the symptoms in a very short time, whilst in other colonies it takes a long time to mature.

Therefore, it appears to me that the only time that we can apply remedies with any chance of success is either as soon as this earlier stage is seen or just before this—for instance, when a bee-keeper is afraid of infection from a neighbouring apiary or stocks, where disease is already known to exist, or has existed. In fact, the latter case is the only one in which I think we can reasonably hope for success, even if we have a suitable remedy. Thus it means that it must act as a preventive rather than as a cure.

However, I am prepared to admit that the treatment of a diseased stock in the earliest stages may be advisable at times, especially if this happens to be at a time when there is some possibility of quick repayment.

Supposing we have a stock that shows the first symptoms in August or the latter part of the year, then I submit that it would be foolish to dabble with it, because such a long time must elapse before the next honey flow. On the other hand, if the earliest signs are seen just before or during the honey flow (unfortunately this happens very often), then it is a different case, and if we can keep the disease in abeyance for a while by the use of drugs and cleanliness, there is something worth working for. I have known very many stocks that, having been assisted by the bee-keeper at this season, have secured enormous crops of honey. I had a case under observation some three years ago where three strong stocks, showing signs of disease early in June, afterwards secured for their owner over 300lbs. of beautiful extracted honey, and then died off before the end of August the same year.

Sometimes I have known diseased stocks display remarkable energy. Over and over again they have insisted on swarming, and in some cases great quantities of bees have been thrown off in natural swarms, eventually to die off in a short time. Unfortunately many of these

swarms decamp and transport the disease to other districts.

My view of these cases is that the disease makes the bees restless, and they endeavour to restore nature by multiplying so as to provide against extinction.

The same thing is noticed in stocks that die from the disease in the winter: we find the queen has been unusually active and breeding as in spring, thereby trying to make up for the losses from disease.

On this question of stray swarms I am constantly, whilst on tour, being asked by beemen whose districts have been denuded of bees by disease: "How can I account for so many stray swarms coming into the district? Old bee-keepers cannot remember so many before, even when the districts were well stocked!" My usual reply is, that I believe Nature is trying to right herself by this means.

Stray swarms entering districts where bee-keepers have not removed the old combs, etc., upon which their bees have died from disease, make fruitful subjects for the disease to again thrive upon, and are also great barriers to those bee-keepers who are anxiously awaiting their chance for a fresh start.

(*To be continued.*)

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

NOSEMA SPORES AND FORMALDEHYDE.

[9207] Perhaps a reader of the BRITISH BEE JOURNAL can give me the following information:—"Can any bacteriologist inform me whether the spores of *Nosema apis* are likely to be destroyed by a five minutes' immersion in a 40 per cent. solution of formaldehyde?"—L. BIGG-WITHER, Birdwood, Wells, Somerset.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9208] Referring to friend Pearman's letter (9202), p. 427, I quite agree with him that foul brood has been spread with foundation, though not so much because it was badly sterilised, as by afterwards coming into contact with diseased matter by careless handling. The spores of "Isle of Wight" disease (*Nosema apis*) are more easily sterilised than those of foul brood, if the statement in the *Australasian Bee-Keeper* is correct, for it has been recently stated therein that in an experiment conducted at the Australian Department of Agriculture on boiled honey for bees, that *Nosema in honey perish at a temperature of* 134 *degrees* (Fahr.) *applied for ten minutes.*

I wonder if Drs. Malden, Fanthorpe, and Porter can confirm this, or state at what temperature *they* find the spores become harmless.—GEO. HAYES.

BLACKS *v.* ITALIANS.

[9209] Having stocks of Italians, Blacks, first cross, and half-breds, I am very interested in articles on them that have appeared in the BRITISH BEE JOURNAL of different dates, and feel I should like to give others my opinion for and against the different breeds. I will start with the Pure Imported Italians, of which I have only one left. The queen came from Bologna, Italy, in 1913, and I shall keep her for another season to breed from again.

I think they are not good bees for working in sections because they will not be crowded. They will swarm before the hive is full. Also, they leave no air space between the honey and capping, therefore sections never look nice. For working in shallow frames they are fairly good. They also work a larger variety of flowers than the Blacks, and defend their hives well, and are quite as quiet as any other bee, and most prolific.

Now for the Blacks, which I should keep exclusively if I worked for sections only; but they do not breed so early and late as Italians unless they are fed. They also do not defend their hives so well against wasps, which have been a great nuisance to them this season. I have destroyed 103 nests within a radius of 1½ miles, and I counted 162 queens in the last one.

The First-Cross Italian—Black bee—that is the offspring of a Pure Italian queen crossed with a Black drone—is my favourite. Every bee is alike, and I have fourteen stocks of them out of thirty-one, all headed by 1915 queens from my "Bologna queen." In my opinion they cannot be beaten for working for extracted

honey. They work early and late, visiting as large a variety of flowers as pure Italians, and not so given to swarming, but being a much larger bee than either Blacks or Italians, they need a wire queen excluder instead of the ordinary zinc to work through. I have read their temper is very uncertain, but I find if properly subdued at the proper time they are all right; they also allow no wasps to get into their hives.

I will only say a few words about the Half-Breds. Most stocks are very bad tempered and uncertain honey gatherers, no more prolific than Blacks, and real rascals to rob, and all colours of bees in one hive.

I have bred about thirty Pure Italian queens from my Bologna queen, and any amount of Italian drones flying, but not one queen has been mated with an Italian drone, also not one Black queen mated with an Italian drone. That proves to me that the Black drone is always the strongest flyer.—RICHARD LING, Briston, Norfolk.

SWARMING EXPERIENCES.

[9210] For some years a colony of bees has been established in the female wing of this Asylum (Brookwood) in a ventilator. On Saturday, May 29th last, a swarm of about 6lbs. issued from it, and settled near the extremity of a branch of an adjacent tree, some thirty feet or more from the ground. I obtained assistance, and by the aid of two long ladders lashed together at the top and steadied at the bottom, was able to capture the swarm in a very unsuitable packing-case. In the evening the swarm was removed to the lawn, and a hive was ordered by telephone, but delivery was delayed.

On Tuesday afternoon, June 1st, the bees left the box and settled in an adjacent oak tree. A more suitable box with feeding arrangements was made. The branch on which the bees had settled was cut down, and the bees put in this box pending the arrival of a hive.

Later in the day the hive arrived, but as the frames had to be wired, and foundation fitted, hiving could not take place that day.

On Wednesday, June 2nd, another swarm issued from the colony, settled on the same tree, and was caught by the same means. Two W.B.C. hives were at once ordered.

On going to see the first swarm, however, it was found that the box was empty. As such a short time had elapsed between the issue of the first and second swarms, I was at first of opinion that the first swarm had returned to the tree, but further enquiry elicited the fact that the first swarm had originally issued from the colony on Thursday, May 27th, but had returned. This, together with the remarkable fact that there was not a single drone in any of the swarms, points to the conclusion that the entrance must be so small that the queen had experienced difficulty in emerging.

On Saturday, June 5th, another swarm issued from the parent stock and was caught and hived safely. Both swarms were fed for about twelve days, and worked well. The absence of drones, and the dearth of bees in the district, caused some uneasiness as to whether the queens would be fertilised, but on June 18th and 22nd respectively, brood was found in each hive. The whole of the brood chamber was soon filled with brood and sections were added.

The bees were Ligurians, the yellow bands being quite conspicuous, and the queens were brown.

On August 1st queen cells were discovered in No. 2 hive, and by August 4th a swarm must have issued, as there were then no eggs in the cells. No fresh brood appeared until September 3rd, when it was found that the hive was headed by a black queen. The number of bees had become so small that it was doubtful whether they would survive the winter. The queen, however, laid well, and a comb of bees and one of honey from the other hive was given them. The other hive did well.

Now comes the most interesting part of the story. On November 10th one of the medical officers called the attention of the medical superintendent to something unusual in a birch tree some forty feet or more above the ground. Looked at through opera-glasses it appeared to be comb. The following morning the branch was carefully cut down and lowered, when the combs were found to be full of live bees. Judging from the weight, food must have been very short. A box was made to fit the comb so that the ends of the branch to which the combs were fastened rested on ledges. Three strips of wood, reaching from ledge to ledge, were inserted, and three cakes of candy placed across right over the combs.

As we have had some sharp frosts, and also heavy rains, it is difficult to understand how the bees have managed to sursive. The leaves on the tree afforded some shelter, but when the leaves fell the comb was left completely at the mercy of the elements. Whether these bees will live through the winter remains to be seen. One can only hope for the best when everything possible has been done.—GEORGE BRYCE.

ECHOES FROM THE HIVES.

This has been a very fair honey year round here. I only had two hives this year, and both swarmed while I was away from home, in spite of plenty of room and ventilation. I took off 28 lbs. of run honey and thirty fully-finished sections from one hive, and 32 lbs. of run honey and ten finished sections from the other. I also had about thirty unsealed but almost finished sections between the two hives, the result of a sudden brisk honey flow about July 27th. Where the late honey came from I do not know, unless it was from Tritomas, of which I have a hedge about thirty yards long, and it was a mass of blossom.—E. M. ROCKE. Aston-on-Clun, Salop.

WEATHER REPORT.

WESTBOURNE, SUSSEX.
NOVEMBER, 1915.

Rainfall, 3.20in.	Minimum on grass, 18, on 27th.
Below average, .08in.	Frosty nights, 16.
Heaviest fall, .97, on 11th.	Mean maximum, 41.6
Rain fell on 10 days.	Mean minimum, 32.7
Sunshine, 90.3 hrs.	Mean temperature, 37.1.
Above average, 21.9 hrs.	Below average, 6.2.
Brightest day, 19th. 5.6 hrs.	Maximum barometer, 30.701, on 21st.
Sunless days, 5.	Minimum barometer, 28.832, on 12th.
Maximum temperature, 56, on 12th.	
Minimum temperature, 25, on 27th.	

L. B. BIRKETT.

Notices to Correspondents

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith. There is no fee for answering questions.

H. A. HOPKINS (Norwich).—The hives will now be quite safe to use again. It is safer to use new frames. The cost is so small compared with the slightest risk of re-infection.

Suspected disease.

F. H. SALT (Stoke-on-Trent).—The bees are suffering from "Isle of Wight" disease.

"AILSA" (Rothesay), E. HARPER (Sedbergh), "N." (Cumberland), H. G. MOYSEY (Somerset).—The bees have died from "Isle of Wight" disease.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 3s. per ½in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock** *to dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

SECTION honey for sale, pure heather or clover, well filled and sealed.—GIBSON, Hobberlaw, Alnwick, Northumberland. v 81

WILL exchange two strong, healthy hives of bees, on standard frames, plenty of stores; six 1914 pullets, single comb Rhode Island, and six 1915 pullets.—J. REAVELEY, Starbeck, Harrogate. v 83

TWENTY exceptionally well made W.B.C. hives, two lifts, painted, 10s. each; empty section racks, 1s. 3d. each; 5 gross ½lb. bottles, complete, 13s. gross. Illness compels sale.—OWNER, c/o BEE JOURNAL, 23, Bedford-street, W.C.

SOFT BEE CANDY, medicated or plain, 1lb. glass top boxes, 7d.; postage, 4d.; 2lb., 1s. 2d.; postage, 5d.; reduction for 7lb. and over.—Address, "SUGAR," "B.B.J." Office, 23, Bedford-street, Strand, W.C.

FOR sale, 2 bar-frame hives and 1 skep native bees, young queens, guaranteed healthy. Owner joined Army.—P. CRUICKSHANK, Station Master, Grantown-on-Spey. v 86

SELL, wax extractor (Gerster), 5/-; 4 honey tins (½cwts.), with taps, 5/-; 2 mahogany section show cases (3doz.), 2/6; 10doz. shallow frames, in flat, 5/-; 6doz. ditto, little used (no disease), 3/-.—MASOM, Moorend, Stony Stratford. v 85

WANTED, cloth-bound copy "Bee-Keepers' Record." Vol. 7, year 1889.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, good lantern slides on poultry-keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, the following: Cloth editions "British Bee-Keepers' Guide Book," 3rd 4th, 5th.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

BUSINESS ADVERTISEMENTS.

COMFORTABLE APARTMENTS for Brother Bee-keepers visiting Douglas. Terms: Tea, bed, and breakfast, 3s. 6d.; or full board, 5s. per day.—HORSLEY'S, Merridale House, top of Castle Drive, Douglas, Isle of Man.

1915 PULLETS for sale, all popular breeds, from noted strains for winter laying; birds on approval; free catalogue.—DOLLIS PARK POULTRY FARM, Church End, Finchley. v 29

ENGLISH, Welsh, and Irish run honey, in bulk, required, carriage paid Cardiff. Sections in gross lots.—ROWE, 6, King's-road, Cardiff. v 70

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£100 ONE HUNDRED POUNDS will be paid by the above Corporation to the legal personal representatives of any person who is killed by an accident causing material damage to the passenger train in which the deceased was travelling as a ticket bearing or paying passenger, or who shall have been fatally injured thereby, should death result within one calendar month after such accident. **Provided** that the person so killed or injured had upon his or her person or had left at home this coupon, with his or her usual signature, written prior to the accident, in the space provided below, which, together with the giving of notice within seven days to the above Corporation is the essence of this contract.

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Signature ....

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FOR HOUSEHOLD USE & FOR BEES

For the accommodation of Bee-keepers guaranteed Pure Cane Sugar will be supplied in large or small quantities through this office.

Prices are subject to market fluctuations.

PURE CANE RAW SUGARS.

No.		7lb.	28lb.	56lb.	Cwt.
4.	DEMERARA or TRINIDAD, finest	2/5	9/6	18/9	37/-
	,, second quality	2/4	9/2	18/-	35/6

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*10.	LUMP	2/11	11/8	23/4	46/-
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1.	,, extra large ..	2/7	10/2	20/-	39/6
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14.	CASTOR	2/8	10/6	20/9	41/-
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Scottish and Irish Orders, special arrangements. CHEQUES payable to W. Herrod-Hempsall, 23, Bedford Street, Strand, W.C.

* The Sugars marked with an asterisk are recommended for bee-food. Unrefined sugar should not be used for this purpose.

CASH TO BE SENT WITH ORDER.

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print below a further list of names to those sent in. We shall be pleased to have other names as soon as possible.

Sergt. Ed. Gill, Whitehaven—Border Regiment.

Col.-Sergt. H. Sparkes, Cockermouth—Border Regiment.

Pte. J. Palmer, Kendal—Border Regiment.

Pte. A. Crossley, Kendal—Border Regiment.

Pte. J. Wedgwood, Egremont—Border Regiment.

Pte. H. Smith, Keswick—R.A.M.C.

Pte. Roland Braithwaite, Kendal—R.E.

Pte. H. Casson, Seascale—R.E.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. Herrod-Hempsall,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount received ..... 170½ lbs.

BELGIAN RELIEF FUND.

	s.	d.
Amount received	9	4

This fund will be finally closed at the end of the year. Will intending donors please send their "mite" as early as possible.

REVIEW.

Embryology of the Honey Bee, by Dr. E. F. Phillips. 8s. 6d. net.—Although in the preface to this book Dr. Phillips truly says that "the good bee-keeper is he who is interested not only in those things which have to do directly with the production of honey, but to whom everything pertaining to honey bees has a deep interest," the work is far too technical for the average bee-keeper to understand, and would appear to be of more interest to the scientist or student of embryology. It bears evidence of a large amount of careful study and research both with the microscope and in the writings of other investigators. To those who can understand the technical terms it will prove valuable and interesting. Whether the knowledge that "the first indication of the posterior mesenteron rudiment becomes visible as a slightly thickened area of the blastoderm just cephalad of the caudal pole, on the ventral surface," or "In cross sections through the posterior region of the proto-cerebral lobes, caudad of the point where the anterior mesenteron rudiment comes to the external surface, there is seen on each side a group of cells whose nuclei have the small size and dense appearance characteristic of the dermatogenic ectoderm bordering the neurogenic area of the trunk" will help any bee-keeper to make the slightest improvement in his strain of bees, or obtain an ounce more honey is, to say the least, doubtful. The passages above are chosen at random, and give a fair idea of the style of the whole book—which runs to over 200 pages. It would appear, in fact, that the author has used the most technical terms he could find. It is impossible to write a work of this description without a certain amount of technicality, but surely if this was intended for the "bee-keeping public" (see preface) it might have been made much more simple and "understandable." For instance, was it necessary to always use such words as "caudad," "dorsad," "ectad," &c., instead of "backwards," "upwards," or "inwards?" Yet in one short paragraph on page 177 we have this: "Each member of the pair runs ventrad, ectad, and caudad to an attachment of the hypodermis at the base of the first maxilla. The muscles of the second pair

are attached to the anterior arms of the tentorion just cephalad of their junction with the central body, and run obliquely dorsad, laterad, and cephalad to a broad area of attachment on the cranial wall, laterad of the cephalic lobes."

The book is illustrated with well-executed drawings—five plates, with fifteen illustrations of the egg in various stages from the time it is deposited until the larvae hatches are exceptionally good.—J. H. H.

Honey in Cookery.—Gleanings for 1st October is a special number devoted to the use of honey in cooking, and it is all over so good that I think a demand should be made for it which would justify a large order being sent to the other side for copies. A good many articles are given on the food value of honey, its constituents, and a very large number of honey recipes used in cooking. Quite a collection of photographs of articles, showing up most temptingly, in which honey plays a most interesting part are shown as ready to place on the breakfast, tea, or supper table. Fruit is exhibited as canned without sugar, and we are informed that only those who use honey in preserving fruit can appreciate the rich flavour and the fresh natural colour of the fruit thus preserved, while it is claimed that preserves keep better than when sugar is used. Drinks, too, find a place in the list, and I am quite certain they would prove delicious in warm summer weather. Honey is recommended as cough cure, a cure for asthma, and a remedy for sore throats. Pliny, 2,000 years ago, called honey the sweetest and most pleasant of juices. "There is no pleasanter or better remedy to save mortals from deadly evils." I wish we could convince the general public of this fact, and then our industry would boom.

"*Dont's—and Why?*"—Books go into minute details as to how bee-keepers are to *do* things; it is well to consider also things they should *not* do if they are to succeed in making the industry pay. *Don't* take it for granted when packing up a colony for winter that a queen is present in each stock. Either see her or find out that there are evidences of her presence in the hive. *Don't* accept her presence as proof that she is worthy of heading the stock; obtain proof that she is fertilised. *Don't* pack small lots of bees in the pious belief that they will come through all right somehow. Weaklings are unable to keep up the temperature in a cold winter. *Don't* do anything tending to robbing. In nine cases out of ten a robbing boom is started by the carelessness of the bee-keeper. *Don't* be content with any kind of syrup for autumn feeding; badly made food is a fertile source of dysentery and other bee ills. *Don't* tolerate a single cell showing foul brood germs; get rid of even the smallest suspicion of such. *Don't* accept old hives, even as a gift, when there is doubt possible that they have contained bees which have died from disease. *Don't* feed bees with cheap inferior honey. Syrup should be made of the best. *Don't* feed at untimely periods in spring, tempting the bees out by the consequent stimulation, when the temperature chills and kills them. *Don't* have leaky roofs. By the end of September each year see to it that they are made watertight. *Don't* leave too large an entrance in winter to allow cold, chilling winds, drifting snow and driving sleet to find an entrance. *Don't*, however, make it so small that the bees cannot secure ventilation. Remember, bees are breathing creatures. *Don't* disturb your hives during winter, and, indeed, as little as possible all the year round. *Don't* afford mice or other vermin a chance of finding their way into hives during the season of repose. *Don't* place too much faith in so-called cures of "Isle of Wight" disease. Try them, test them if you like, but with an open mind leaning towards doubt and scepticism. *Don't* be too ready to change your bees for foreigners however much they may be boomed. Last year a friend lauded Carniolans; this year his curses are not loud but deep. *Don't* go in for new fangled hives. Nothing can beat our own one with space for ten standard frames. *Don't* at the end of the season sell your honey to the first bidder of some low price. *Don't* be discouraged if you lose your bees with disease. Clean up, disinfect, and start again. It pays. *Don't* attempt a start without reading up all the available literature on the subject. This, too, pays.

"*Simplified Bee-keeping.*"—When these strenuous times of stress and strain have passed away, as they will do, "back to the land" will be the watchword of thousands. In the neighbourhood of our large cities, smaller towns, and thriving villages, in the centre of our most fertile agricultural areas, in all our inland dales, glens, and straths, the day of the smallholder will have arrived *to stay*. Then

apiculture will, too, have its day. One of the minor industries, it is the best paying of the lot, and, carried on as one of several others, it can be dovetailed into so many other occupations that surplus honey will be nearly all profit. Pat for the occasion comes Mr. Herrod-Hempsall's small book, "Bee-keeping Simplified," a veritable *multum in parvo*, dealing briefly but lucidly with every phase of the subject. An experience of over a quarter of a century in every branch of apiculture makes the author write with a weight and authority gifted to few in our time. The book is well illustrated, written in language capable of being understood by the merest novice, and the instruction given is from first to last thoroughly practical and dependable. Every man or woman intending to go in for bee-keeping should start with a copy of this little work before even investing in hives, bees, or appliances. It contains as much information as is found in many of our larger and more expensive books, and it is all fresh and well up to date.

A DORSET YARN.

In reading carefully Mr. Tilley's letters in *Dorset County Chronicle* on "Pollen Hunger," *i.e.*, feeding with pea-flour as an antidote for so-called "Isle of Wight" disease, one cannot but be struck with the assuredness of the writer. He quotes of Dorset bee-men with numbers of stocks, some who lost nearly the whole. The few left Mr. Tilley bought, dosed them on fine dry days with pea-flour, and gradually saw them gaining strength and vigour, until they lost all signs of wing disorder; to me it reads like a romance, and one which must be carefully tried next season by at least one other Dorset bee-man. One great man has written that there are more things in heaven and earth than were ever dreamt of in man's philosophy. We shall find a cure for this dire evil, and it may be a very simple one when found.

To-day I saw one of the first flowers that open for the new year, the Christmas rose (*Helleborus niger*). Most of them open a few flowers at Christmas time, but usually the wealth of blossoms come in the new year. They will last a very long time on the plants; even till the seeds are developed they are interesting. It is one of the species of plants that does not grow everywhere, but when established produces hundreds of flowers on a very few plants. This flower gives a great deal of pollen, but a bit too early for our little friends to make use of. The later flowering varieties are more useful to them, though for sale the flowers are not so valuable as are those that bloom at Christmas. It would be a great help to all if good bee flowers were more generally known than they are. Mr. Geo. Hayes, the clever scientist, of Notts., recommends Bokhara clover as a good honey producer as well as a heavy forage plant.

Mr. Bowen, of Cheltenham, says: "Plant Willow Herb," a plant with a long botanical name, which grows wild in great abundance in damp woods in the southern counties. I have lived only in Berks, Surrey, Middlesex, Dorset, and Hants. In each of them it is a wildling, blooming in early summer and for a long time after. Their tall spikes of blossoms are 4 and 5 feet high. One would not advise them for the flower border, as they would soon crowd out every other good thing that was near to them. I have seen the common wall-cress (called by some "Snow on the mountain") in huge masses covering everything else in rock gardens. Each year it extends its growth, covering up its neighbours. The Willow-herb sends out its strong stolons for the next year's blossoms on every side. You would soon have nothing else but Epilobiums. We who live in rural England among the trees and flowers, with all God's creatures round us, we truly live; life is not a mere existence.—J. J. KETTLE.

MUSINGS AND A MORAL.

In a recent issue of the JOURNAL (p. 400) an American writer is roundly taken to task for asserting that gatherers of nectar seem to waste time over storing it in the combs; also that after bringing in a load the worker takes a more or less prolonged rest. In support of the second statement I have nothing to say. As regards the first much depends on whether or not a brisk honey flow is in progress. My impression is that in the latter case she is apt to be deliberate and fanciful as to storage, just as are the pollen gatherers. These frequently—one might almost say habitually—wander with their loads from comb to comb, peeping now and then into a cell, dallying to pass the time of day to a friend. Arriving at a fairly clear place they begin to circle round and round in frantic fashion, stopping only to shake themselves like a dog just out of the water. In this dervish dance the neighbouring bees take great interest, so that the whole proceeding takes on the appearance of a game. It is not really so. I have long ago made up my mind that the shaking is an effort to clear the spiracles of obstructing pollen grains. After many minutes the journey is

resumed, and in the end the pollen finds a resting place. In a word, hive labour is desultory.

Henri Fabre, of whom in the same issue of the BRITISH BEE JOURNAL an obituary notice appeared, was an ardent and successful naturalist. He resolved many doubts and made new discoveries; yet it may well be that to trace back to its component parts what makes up the spirit of the hive would have baffled him. It would be necessary to follow up day by day the doings not of one only but of many an inhabitant to determine what is the natural course and what the eccentricities of the average worker. Unfortunately, these otherwise delightful insects discourage familiarities — *sternly* discourage them. So that to most of us a bee remains just a bee during its brief existence; we cannot, and do not, try to distinguish between individuals. Yet they must differ not only in appearance but throughout the whole range of their characteristics. To most of us a sheep is a sheep, and we recognise no difference until we meet them as mutton; yet the skilful shepherd knows each one of his flock apart from the rest.

Birds of the same species vary greatly in appearance and also in song. The usual call of the wood-pigeon is so well known as to have been expressed in words as follows :—"Two coos, Taffy; take two coos, Taffy; take two coos, Taffy; take . . ." A few summers ago a pair of these pigeons nested near our house. In the third phrase of his exhortation the male bird always introduced an extra note, making it run thus :—"Two coos, Taffy; take two coos, Taffy; take two coos, *dear* Taffy; take . . ." giving the word an emphasis that made it very effective. Possibly this interesting variation proved unpopular or the singer went elsewhere. Since that spring we have listened for it in vain.

Take, again, the blackbirds. They seem at first sight to be all alike, but they vary a good deal in size and appearance, and notably in their vocal powers. I once knew a blackbird that sedulously whistled the refrain of "Charlie is my darling," and, sad to say, he was nearly a semitone flat all through. Whether this was owing to want of ear on the blackbird's part or on that of the cobbler who owned and probably had taught the bird I had not, much to my present regret, the curiosity to ascertain.

As, then, in animal and bird life so doubtless with bees. The individuals vary in appearance, in disposition and temper, and even in their inclination to work. The peculiarly restricted development of the worker may perhaps accentuate the whimsies to which it must be confessed her sex is liable. Who shall say that in the busiest hive there may not lurk a few weary Wilhelminas?

The moral: Be shy of saying what a bee will do or won't do.

As we are nearing the end of gloomy 1915 I take the opportunity of making my respectful salute to brethren of the craft now fighting in many quarters for the Empire. Good luck to them! And as a last word to all good bee-men, including our worthy Editors—aye, and to all good bee-women—happier times for all of us.—H. J. O. WALKER, Lt.-Col., Leeford, Budleigh Salterton.

BEES AT THE DOOR.

I don't know which moment is the most precious in a whole year's bee-keeping. There is the day in January when a few foragers go out for water, or when the very first pollen loads come home from the Christmas roses. A happy day that, if every hive we packed down in October is doing something in the same line. Then, after February snowdrops, comes crocus-time, when we can almost safely make our spring-count and declare that so many hives are good for the summer. Such lovely pollen bundles are these that we long to take a hand in bringing them in. Instead, we go and get pea-flour and soon have a swarm of dusty millers at the trough, and know that we are giving a tremendous fillip to brood-raising.

A very happy day is that on which the first young bees are dancing before the hive, another when the first drone comes out for a fly, and another when we have dared put on the first super and see the workers going strong at the porch. We don't know properly how many bees we have till a showery day in April comes. Then a cloud over the sun while all the bees are out brings them flocking home in incredible numbers, crowding the entrance like first-nighters at a theatre door and filling the air into the invisible distance like a musical snowstorm. Another grand day is at the summer honey-flow. A really strong hive of Goldens carrying brick-orange pollen from limitless sainfoin makes a picture to wring hymns from the most matter-of-fact of bee-keepers.

But I don't know that the sweetest day may not come in winter, when a mild day releases the bees after a month of frost has shut them up. To see the brave things carrying out their inevitable dead and brushing out the cappings of the stores they have eaten, even to see only their feet as one or two bustle about within the hive, or no more than a flake of wax as it is thrown out by an unseen

foot, is to be present at the birth of all the other joys that I have numbered among the possible best moments of the year.—G. G. Desmond, Sheepscombe, Gloucestershire.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9211] Referring to the interesting letter of Mr. Price on page 435 (9205), I admit he is a person of considerable experience, but he has taken me into the woods and left me, and I do not know where I am. The case is this: A lady borrowed an extractor to extract honey from the worst case of the disease I ever saw. The gardener returned the extractor about dinner-time just as it was used, with a fair amount of honey in it. The owner was from home at the time, so it was left outside at the back door. When the owner returned about three hours later the extractor was full of bees carrying that dreadful stuff into his hives as fast as they could. These bees were watched very carefully. In three weeks crawlers were seen. Now I understand by friend Price's letter that this honey would have little effect upon those bees that carried and used it, and that the disease would not show itself at the earliest for three generations, but more often seven or eight generations. This may be, but if so it has taken all the wind out of my sails. I received a letter last week from a bee-keeper of considerable experience in Hants, who has lost from thirty to forty stocks. He says, in warm weather it will show itself in three weeks. Up to the return of that extractor I could swear to the health of those bees. I am glad Mr. Price is with me with regard to the carbolic cloth for experts. I use nothing but a spray made with one teaspoonful of Izal to one quart of water. I will leave this question to bee-keepers with more experience than myself.

I cannot close this without offering a word of sympathy to the widow and family of our good friend the late Mr. R. Brown. He and myself (or perhaps I should say my wife) have been opponents (honourable opponents) in the Trophy Class at "The Royal" without a break since 1904. He was as cheerful under reverses as with successes. He always said the "Royal" was his holiday. I believe it was, and he was greatly missed at Nottingham. You, sir, talk of him calling you from bed. In fancy I see him now peeling potatoes for your dinner, and on no condition would he fail you in entries at the Royal. I regret we shall never see his dear face again, and the sympathy of myself and wife goes out in their sad bereavement to the widow and family who now mourn the loss of a true husband and loving father.—Jas. Pearman, Penny, Long Lane, Derby.

BEES AT LARGE ON A RAILWAY PLATFORM.

[9212] In the early days of June I was asked to attend to a stock of bees which had escaped from a travelling-box, and were at large on the railway platform. On arriving there (without a veil), I found the box covered with bees, apparently very angry. The first thing I did was to move them into the shade. I was asked if I could put them into a train at 3.30 p.m., but the bees—which were on frames of comb—were very slow at going in. When the platform foreman was told they could not be sent on that day he asked if I could shift them off the platform, but out of half a dozen porters not one would give me a lift with them. However, I got them on to a barrow and moved them on to a piece of grass close by, covering them up and leaving a place for them to return into the box. The next morning I started from home at 4.30 a.m., as it was a walk of three miles to the station. The bees had all gone in, so I made them quite secure and started them off again by the first train. Fortunately not many bees were lost.—A. E. W.

SKEPS *v.* "ISLE OF WIGHT" DISEASE.

[9213] I should like a small space in the British Bee Journal *re* "Isle of Wight" disease.

Mr. Woodley, in the Record for October, recommends that we return to

skeps as the only means of saving the remnant of the British bees.

Although I cannot follow him in this direction there is a clue in his arguments which is worth consideration. The skeppist winters his bees on honey, the frame hivist winters his principally on sugar syrup.

We have for many years outraged nature in this respect, and I believe this plague is the result. We know how inferior is this substitute for honey; then why deny the latter to the bees? It would be better to sacrifice a little profit by filling our Canadian feeders with pure honey than to ruin the vitality of our bees with inferior food.—F. RIDER.

APPRECIATION.

Among numerous testimonials to the efficiency of our paper as an advertising medium we have received the following from one of our best known advertisers:

"I have again tried (for several months) another journal, and once more find the results almost nil, so have no doubt you penetrate deeply into the districts covered by the said journal."

Correspondents desiring an answer in the next issue should send questions to reach this office NOT LATER than the FIRST POST on MONDAY MORNING. Only SPECIALLY URGENT questions will be replied to by post if a STAMPED addressed envelope is enclosed. All questions must be accompanied by the sender's name and address, not necessarily for publication, but as a guarantee of good faith There is no fee for answering questions.

MISS E. M. KENTISH (Dorset) *The way to cause honey to granulate quickly.*—Keep it in a cold place exposed to the light. Mixing with it a little honey already granulated will hasten the process. Warming honey will check granulation.

The easiest way to extract wax without an extractor.—Break the comb up and place it in a canvas bag. Weight it with a stone and put it in a pan of water over the fire. The bag of comb should be pressed and squeezed occasionally with a blunt stick to help the wax to escape from the débris. When all the wax is melted, remove the vessel from the fire and allow the water to cool. The wax may then be lifted off in a cake and the underside scraped. (3) Yes, it would be an advantage to do the old brown comb separately.

Honey Samples.

MISS E. M. KENTISH (Dorset).—Both samples of honey are heather blend, mainly from heather and clover. No. 1 is the better of the two, and has a delicious flavour. No. 2 contains more heather than No. 1 and a little bean honey. This also is an excellent honey. They are worth 1s. 6d. per 1lb. jar or section.

Suspected Disease.

A. THOMAS (Dawlish).—"Isle of Wight" disease.

OVERHEARD CONVERSATION BETWEEN TWO LADIES.

FIRST LADY: Does your husband ever call you "Honey?"

SECOND LADY: No. The only time he ever got near it was once when he called me "Old Beeswax."

How does the bee dispose of her honey? —She cells it.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

Trade *advertisements of Bees, Honey, Queens, and Bee goods are not permissible at above rate, but will be inserted at 1d. per word as* **"Business"** *Announcements, immediately under the Private Advertisements. Advertisements of Hive-manufacturers can only be inserted at a minimum charge of 8s. per ¼in., or 5s. per inch.*

PRIVATE ADVERTISEMENTS are only intended for readers having **Surplus Stock to** *dispose of.* **Driven bees, Nuclei,** *and* **Queens that are reared or imported for sale,** *are Trade Advertisements, and can only be accepted under trade terms.*

Advertisements must reach us NOT LATER than FIRST POST on TUESDAY MORNING for insertion in the "Journal" the same week.

Orders for three or more consecutive insertions entitle advertisers to one insertion in "The Bee-Keepers' Record" free of charge.

PRIVATE ADVERTISEMENTS.

LINCS. honey for sale, in 56 and 28 lb. tins; sample, 3d.—ALFRED ROSE, Wrangle, Boston. v 89

A ROLL OF HONOUR.

Although bee-keeping is considered a minor pursuit, we venture to say that it has provided more fighting men than the usual average of any industry. To place on record the part the members of our craft have played in the present war we propose to make a "Roll of Honour," and shall be pleased if our readers will forward us the **Names** and **Addresses**, together with the **Regiment** and **Rank**, of any bee-keeper serving his King and Country at home or abroad; also if killed or wounded.

We print below a further list of names to those sent in. We shall be pleased to have other names as soon as possible.

Lieut. C. H. H. Eales—Indian Army, attached to the 4th Battn. Royal Irish Rifles.

2nd Lieut. L. F. Short, Edgbaston, South Staffs.—3/5 K.O.Y.L.I.

Cpl. G. H. Seamer, Waterloo Road, Millfield, Peterboro'—4th Battn. Northants Regt. (Secretary and Treasurer of the Soke of Peterboro' and District B.K.A.).

Pte. E. Sheppard, Nelson, British Columbia—54th Canadian E.F. (eldest son of Mr. W. J. Sheppard, late Secretary of the Essex B.K.A.)

Pte. J. W. Mills, Gasworks, Wooler—A.C.R.N.

Pte. J. Theobold, West Ilsley, Berks.—A.S.C.

Pte. F. Stapleton, Peterboro'.—4th Battn. Northants Regt.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount received	170½	lbs.
Rev. R. M. Lamb	14	,,
Miss Pinder		,,
Total	188½	lbs.

BELGIAN RELIEF FUND.

	s.	d.
Amount received	9	4
Rev. F. S. F. Jannings	10	0
Mr. J. R. Bridges	3	0
Total ...	£1 2	4

This fund will be finally closed at the end of the year. Will intending donors please send their "mite" as early as possible.

BRITISH BEE-KEEPERS' ASSOCIATION.

There are many subscriptions still outstanding for 1915, and the Secretary would be very grateful to receive these as early as possible, so that he may make up his books. The following, culled from a letter received, is commended, not only to members of the B.B.K.A., but also to those of all County Associations:—"I enclose P.O. for 5s. as my subscription to the B.B.K.A. for 1916. I have a P.O. now, and perhaps I might not have one in January, but I do not want to see the Association go down." This from a man who has lost all his bees in two successive years from "Isle of Wight" disease, and also all his money which he had put by for a "rainy day."—W. HERROD-HEMPSALL, Secretary.

MONTHLY MEETING OF COUNCIL.

The monthly meeting of the Council was held at 23, Bedford Street, Strand, London W.C., on Thursday, December 16th, 1915. Mr. W. F. Reid presided.

There were also present Miss M. D. Sillar, Messrs. G. S. Faunch, J. Herrod-Hempsall, J. Smallwood, G. W. Judge, A. G. Pugh and A. Richards. Association Representatives, Messrs. G. Bryden (Crayford), G. R. Alder (Essex), F. W. Harper (St. Albans), and the Secretary, W. Herrod-Hempsall.

Letters of regret at inability to attend

were read from Messrs. T. W. Cowan, H. Jonas, C. L. M. Eales, D. Seamer, and Rev. F. S. F. Jannings.

The minutes of the Council meeting held on November 18th were read and confirmed.

Mr. H. Sutcliffe and Mr. W. E. Moss were elected members of the Association.

The report of the Finance Committee was presented by Mr. Smallwood, who stated that payments into the bank for November amounted to £9 8s. 7d. Payments amounting to £52 18s. 10d. were recommended. The balance at the bank at the end of November was £156 7s. 11d.

The report of the Examining Board on the lecture test held previously in the day was presented by Mr. Smallwood, and it was resolved to grant a final certificate to Mr. H. E. Scrope-Viner.

The report on the Intermediate Examination was presented, and it was resolved to grant certificates to the following:—Mrs. M. A. Saint, Miss G. Woodward, Messrs. G. Bryden, C. Rutherford, H. W. Cousins, E. Hollingsworth, W. Thorne, J. Nickalls, W. E. Moss, and S. Leedham. A hearty vote of thanks was passed to Mr. D. M. Macdonald for his valuable services as examiner.

The report of the Exhibitions Committee held earlier in the day was presented by Miss Sillar, and was adopted as follows:

The schedule as per last year was passed with the exception of the observatory hive class, which it was advised should be deleted on account of there being no provision for standing them at the show at Manchester.

It is also recommended that the Lancashire Association be invited to have local classes at the show.

Dr. Anderton and Mr. J. N. Bold recommended for appointment as judges, with the Rev. T. J. Evans as reserve.

Mr. Roland Parker, of Milnthorpe, to be steward.

It was unanimously resolved that the Secretary send to the Chairman (Mr. T. W. Cowan) the Council's hearty good wishes and fraternal greetings for the season.

Next meeting of Council, January 21st, 1916, at 23, Bedford Street, Strand, London, W.C.

REVIEWS.

Some time ago we had an advertisement in these pages of "The Nature Book," published by the Waverley Book Co., 7, Old Bailey, London, E.C. The work is in seven volumes. We have now had the opportunity of perusing the pages of this work, and we can conceive of no pleasanter occupation for the lover of Nature during the long, dark and dreary winter evenings than reading this excellent work. Trees, birds, insects, rocks, flowers, animals, rivers, in fact everything in Nature is beautifully described, and the photographs are truly marvellous. We have tried to pick out one special article as an illustration, but all are so good that we have had to give it up.

Another work in two volumes, "British Birds and their Nests," by the same publishers, has also yielded us many pleasant hours and taken us back to the days of our youth. There are also many other works of equal value in their separate departments, for which the price is exceedingly low, and payments can be spread over an extended period. We would advise our readers to write at once for full particulars and conditions from the above firm, taking care to mention the BRITISH BEE JOURNAL.

Bee-keeping. By E. F. Phillips, Ph.D. (The Rural Science Press, edited by L. H. Bailey, New York), London and New York: The Macmillan Company. Price 8s. 6d. net.—The writer very truly remarks that this book is not planned as one of rules, to which one may go for each day's work, but that it is an effort to present a logical discussion of the various phases of the complex subject of bee-keeping. It is mainly a compilation from the Bulletins and other publications of the U.S. Department of Agriculture and other works which have appeared from time to time. These, as is well known, contain excellent illustrations, which have been utilised in embellishing this work. Dogmatic to a degree, the author frequently states that usually accepted theories, which he does not understand, are either not so, or require further investigation.

Although he admits that "the American bee-keeper owes much of his scientific knowledge to European investigators and bee-keepers," he does not seem enamoured with European methods or appliances. He does not apparently realise that the hive used here is better adapted to climatic conditions prevailing in Europe, and is better suited for the purpose, than the single walled hive, tried and discarded in this country. Our bee-keepers would hardly recognise as the W.B.C. hive the one illustrated on page 10, which the writer points out as "less simple than those used in America," and further says "the chief objection, as viewed from American conditions, is a lack of room for expansion, although the complexity of these hives would seriously interfere with the work of an extensive American bee-keeper when in the middle of a heavy honey flow." We can easily point out that our hives, as well as the Dadant, so extensively used on the Continent, are

just as easily expanded as the "simple box" which the author claims as the typical American hive. That our hives are better suited to our conditions is evidenced by the fact of our comparatively trivial winter losses. When we read of seasons when, in America, the losses are from 50 to 80 per cent., as mentioned on page 342, we have reason to be satisfied with our methods, and have nothing to envy in those of our cousins. This country was the first to adopt a "standard frame," and the author is just when he commends American manufacturers for their efforts to make the apparatus to a large degree standard. Although he gives credit to their apparatus "as the best lot of tools ever devised for bee-keeping work," he omits to state how many of these are of European origin. Spacers for frames have been used in this country for the last fifty years or more, but it is only within quite recent times that American bee-keepers have adopted them. On page 294 a steam-heated uncapping knife is shown, but this was invented by Tonelli in Italy, and has been used in this country since 1907, long before it made its appearance in America. It was illustrated on page 336 of the BRITISH BEE JOURNAL for that year. As a contrast to this, the author shows on the same page a "comb for uncapping," which he says is used in Europe. This is either a joke or is misleading, for although such a comb has been figured and advertised by German dealers, we have never seen one, and doubt even if any sensible bee-keeper in Germany uses it. On page 266 a "Novice" extractor is shown, and it is stated "the next advance was in making the reversible extractor," but the author does not mention that it originated in this country, and was designed by Mr. T. W. Cowan, and exhibited at the Crystal Palace in 1875, although it has been more extensively used than any other, not only in Europe, but also in America. In dealing with diseases the author describes that due to *Nosema apis!* Alluding to the heavy losses in England, he says that "no treatment has been suggested except the destruction of the colonies to prevent the spread of the disease." Although it is known that the disease is prevalent in America he says "bee-keepers will do well to await reliable investigation before following such advice." This, in face of the fact that the disease has been investigated by Drs. Zander, Graham-Smith, and others, who have come to the same conclusions, and whose investigations the writer consequently implies are not reliable. Unfortunately, we in this country know that it is those who have not destroyed their colonies who have been the means of propagating the disease. We do, however, envy the legislation which enables our American friends to deal with the dangerous, selfish, and often ignorant persons who will not deal with disease unless coerced. The author states on page 101 that "the larva is sealed in the cell with a capping of wax," whereas it is well known that the coverings of brood cells have pollen added to make them porous. There are several other statements with which scientists and bee-keepers will not agree. There is a good chapter on "The sources of nectar and pollen," in which is given an annotated list of honey plants, many of them with illustrations.

The book forms interesting reading for the student, but so far as practical bee-keeping is concerned will hardly replace such standard works as Dadant's "Langstroth" and Root's "A.B.C. and X.Y.Z.," which we consider are the truer exponents of American bee-keeping.—W. H. H.

CORRECTION.

Embryology of the Honey Bee.—In our review of this work last week, Dr. Phillips was given as the author. This was incorrect, the author being Dr. James Allen Nelson, the preface only being written by Dr. Phillips.

Folding Sections (p. 285).—I wonder if "D. M. M." is right in stating that more speed can be realised by hand-folding than by the use of a block. Probably this is a case of individual skill, but I should expect the block user to outstrip the hand operator, having due regard to quality of work. This refers to the ordinary split section, where the foundation is inserted at the one handling, such sections, in fact, as "D.M.M." uses, with unsplit sections the difference would hardly be so marked. I use the latter and fold by hand. The sections are then put into section frames, and a triple block inserted as a foundation guide, when three sheets are waxed into place. By this process the sections remain perfectly square, and there is no danger of the foundation touching the section side. But even without block or section frames there should be no difficulty in folding truly. The section has four corners, three of them folded and one dovetailed. Its tendency after folding is to flatten or open out, and the dovetail corner being neutral or weak, the folded corners of one diagonal overcome the other, a diamond resulting instead of a square. To cure this tendency, simply fold the ends

of the section a little too far, say, half-an-inch, just before marrying the joint. This works perfectly. Try it and see. The easiest way to wet the joints is to pour water through the holes whilst the sections are still in the packing-case. A rubber pipe attached to a tap simplifies the operation. Smaller numbers may be treated in the same way if held tightly together. This method wets both sides of the section just where required.

The Patience of Job (p. 286).—What makes "D. M. M." think that the relations of Job were particularly patient? The relation of Job and his trials is itself sufficient to try the patience. But if we know aught of human nature, we may suppose that one so patient as the patriarch would be enough in a family, and that his wife at least might regard him as an exponent of exaggerated virtue. Indeed, a careful perusal of the record indicates as much. Bee-keepers are proverbially patient, though there are exceptions. As witness the story of the harassed bee-master, whose wife heard him using unbiblical language to his pets, and counselled patience, citing the classical example. "Patience, indeed," shouted the now infuriated victim, "Job never had a bee up his troosies"!

An Emergency Hive (p. 295).—Here is an idea for the busy bee-keeper who finds himself landed with swarms for which he has no housing accommodation. Simply hang the frames between two boxes, the lugs being supported by two sticks laid across from box to box. Cover with a few bags and a stone or two to keep them in place. Of course, a hive roof, or a square of roofing felt would be better, but I am supposing that nothing of the kind is available. Where gantries are used to support the hives, the same idea can be carried out if the sides of the gantries are more than 14in. apart. The frames could even be hung under a tenanted hive if there were no room elsewhere. In this case a couple of division boards would be needed, and all weeds should be cleared from the back to suggest the desired entrance.

Strengthening Weaklings (p. 304).—Although this method has perhaps D. M. M.'s imprimatur, it is not, I think, a good one. To shake bees down in front of some colonies, however weak, is to invite their destruction. As for the baby bees just out of their cells, it is the cruellest and most wasteful procedure. Many of these tender bees will never reach the door of the hive for which they are intended, and in any case they should not be subjected to such shock. I further believe that the severe shaking of a comb containing larvæ results in damage to them. By far the better method is to place a hanging excluder in the centre of a strong stock, and a week or so later take combs from the side unoccupied by the queen. The same thing can be done by raising combs over an excluder, but if the queen is not likely to be unduly hampered the other method is simpler. These combs are then to be given, with the adhering bees, to the weaklings, and their places filled with foundation. This method involves less labour, gives better results, obviates the necessity for queen finding, and controls the swarming tendency of the present stock.

Sting Remedies (p. 305).—Still they come! It would appear from the long roll that almost "any old thing" were a specific against bee poison. One is led to wonder whether "faith" is not an important factor in these messes, just as in the days when a dead mouse was regarded as an important ingredient of certain remedies. About the only cure unmentioned by these careful dictionaires is bee poison itself, which, if injected at suitable intervals, is generally regarded by the brotherhood as an infallible remedy.

Sweet Clover (p. 326).—The Queensland apiarists are said to have "discovered" this plant, and its value for forage and honey, but in justice to A. I. Root, the credit should belong to him, as he advocated it for years, in season and out, and in spite of a considerable amount of opposition on the part of farmers who persisted in regarding this valuable plant as a noxious weed. I mention this fact, as the apiarists of Queensland, happily named country, seem determined not to be denied, as they again struggle into print on page 347 with a second crop of the identical article!

Reasons for Late Swarm (p. 329).—Several possible reasons may be suggested to A. F. H. One is that it was a case of supersedure, and this might be checked by the subsequent history of the old queen. Another is that it was induced by manipulation, and the removal of the rack full of honey. Possibly the queen was injured either by the bee-keeper or the bees at the time of this manipulation. In this case, the swarm would have a virgin queen. A final suggestion, which should be investigated, is that the brood seen was diseased, and that this fact was not noted. Any of these reasons would fit in with the weakened condition of the stock.

HONEY IMPORTS.

The value of honey imported into the United Kingdom for the month of November was £685. From a return furnished to the BRITISH BEE JOURNAL by the Statistical Office, H.M. Customs.

A DORSET YARN.

A few hours of warm sun brought out the bees from several of the hives on December 11th; only one with the yellow band, the rest were "the little brown 'uns," as we Dorset people call them. I was glad to see them out, as my neighbours had grave news to tell me of some of their stocks; plenty of stores, but all the bees dead. It is all put down to "Isle of Wight" disease. At the Towers they had all new hives and had paid about 30s. each for them, with a rack of sections and lifts; all had new wood and newly painted; all the colonies were strong and worked late in the season; all had new frames and new wired foundation; there could not be any very stale pollen. "Is it in the foundation?" my friends ask. I cannot think it is, or they would have shown the disease when drawing it out! One might well ask what are our men of science doing? Can nothing be done to stop this dire pestilence which is decimating our stocks in so many places? This is the first year it has been in Corfe Mullen. I hope it will be the last; it was in Wimborne last year.

Beyond spraying potatoes in June there were no poisonous insecticides used within four miles; one could not expect this to have anything to do with it, because I have not seem them working the potato flowers; even if they did the potatoes were sprayed before any flowers were showing

Enough of Jeremiah's Lamentations! Our chemists must find us a remedy. I had a friend a chemist who started to find a cure for rust on carnations. Of course he found one; he tried one specific after another till the right one came. So must our men (bee men) combat this disease. It used not to be, so it is something that is used to-day on the land. Years ago we dressed with guano (the excrement of sea birds), now we use basic slag. One would think the lime used in the manufacture of steel would have corrected impurities. Still one cannot tell unless one has the wherewithal to analyse the stuff. Then large quantities of superphosphate are used on the grass lands of Dorset to encourage the growth of the fine grasses which produce our high quality butter. Only last week I saw a machine distributing this fertiliser on the fields at Merley, the next village to this. Yet one would think it would be all washed into the soil before our little friends are about again. If some remedy is not soon found bee-keeping will very shortly be a thing of the past.—J. J. KETTLE.

NOTES FROM CUMBERLAND.

The past season here has been similar to that mentioned by Scotch and Northumberland bee-keepers. Bees offered well in the spring and early summer. Clover came on in good time, and bees gathered rapidly, when the season suddenly closed, and although strong stocks had done well, takes on the average were not much more than half the usual amount, and although honey seems to be looked upon as a luxury during the war, stocks are already getting low. From what one reads of the season's results, and by advertisements in the BRITISH BEE JOURNAL, honey will be scarce. The heather was almost a complete failure, and about the only thing one could hope for was that the bees had spent the time more profitably there than at home, as brood nests were light of stores in early August. I scarcely got one decent section, and where foundation was used in them they came back six weeks later in the same condition. Brood nest stores had improved, but I had to feed an average of 7lbs. of cane sugar to each hive, and only two hives needed nothing but packing down. However, there are worse things than hunger at the moors, for one of my stocks, which came back weak, and in front of which I noted dead bees in the evening and attributed it to robbing, on being united by a strong lot being put to them, developed what was clearly "Isle of Wight" disease, and on visiting same hive mid-day about two or three days after uniting—as by this time I was anxious and keeping a sharp look out and frequently visiting—I found unmistakable signs. There were fully two thousand bees on the grass in a broad to a tapering stream, three or four yards long, stretching in a S.E. direction—the line of flight generally taken—with stragglers on both sides, and further away, climbing grass stems in vain endeavours for flight, also yellow blotches of excreta about hive. I had united the bees on the Wells plan; with divider in centre, and used flour for pacification, and wondered whether the flour eaten by the bees, along with the strain of syrup feeding, had weakened the already lowered vitality of the original lot (which seemed to be the sufferers, and which had been recombed, but not requeened, earlier in the season, my intention in uniting being to kill the old queen in the spring should both survive the uniting) the unnatural food above lowering the vigour of the bees, allowed the disease to develop. Otherwise, why should this be the only hive to develop disease? One would think that at the moor bees suffering from "Isle of Wight" disease would not have sufficient energy to attempt to rob a weak hive and thus carry in the disease, and

the weak hive itself would hardly attempt robbing and so bring in the disease from a suffering hive, though, of course, one cannot be certain.

As it was late in the season, and expecting bees to fly no great distance, as flowers were very scarce, it being then October, I closed the hive that night and removed it to a hill where bees are not kept within one mile, and about one mile from my hives. Had it not been for the united bees, which were strong and vigorous, I would have sulphured the lot, or had it been summer time and bees flying and intermixing, I should have done so, but I thought the vigour of the united bees might pull the lot through before spring came round with longer flights. A few days later I noticed crawlers in front of the adjoining hive. I stand my hives in two's, and have since, on flying days, seen odd ones. Whether these may be wanderers from the isolated stock, or incipient cases in the No. 2 hive, I cannot be sure, but have gradually moved the hive further away from No. 3, now some six yards distant in a N.E. direction and not much in flight line. This hive, No. 2, still shows a strong, vigorous flight of bees on suitable flying days, and I am at a loss whether to take them—after a week or two's confinement by winter to ensure bees not coming back to No. 3—to the isolated lot which are still fairly strong, or whether to remove them to another part of my orchard sixty yards away from my home hives. Do you think this safe?

One feels a reluctance to sulphur bees like these, both strong and vigorous. I am no believer in chemicals to remove disease, either in bees or humans, but to guard against cause and keep things natural and vigorous. And I think, seeing the time elapsed and experience which has been gained, our editors might now give us, as far as possible, some authoritative statement on reliable observations in respect to the disease and survival of affected stocks. So many people rush into print that one, not knowing them, cannot tell what value to put on the many letters in the BRITISH BEE JOURNAL on the subject. If I remember, the disease was at Swanley, and many would like to hear from an authority whether bees affected may survive, although I know that it is dangerous to encourage careless bee-keepers to keep such stocks, as they might die out weeks before their owners knew it, and robbers have been spreading the disease all the time.

Foul brood is no terror to an experienced bee-keeper, though it lessens profits and adds to labour, yet to careless bee-keepers it is a positive danger.—CUMBRIAN.

[The whole of the affected bees at Swanley were killed and burnt. The whole contents of the hives were also burnt, and the hives thoroughly disinfected. The procedure followed was exactly in accordance with the advice we give our readers. The hives were then restocked with swarms of healthy native bees on new frames and foundation, and up to the present there has been no recurrence of the disease.—EDS.]

CRAYFORD AND DISTRICT BEE-KEEPERS' ASSOCIATION.

PRIZE ESSAYS—AN INTERESTING INNOVATION.

I take the liberty of giving a few notes relative to our last meeting held at St. Paulinus Hall, Crayford, on the 22nd November. This was our first winter meeting, and nearly thirty members were present. Among others were Mr. E. R. Stoneham, Mr. A. Dewey, Mr. V. E. Shaw, and Mr. G. Bryden, vice-presidents; Mrs. Baily, Mrs. Banks, Mr. and Mrs. Sykes, Mr. and Mrs. Paulin, Messrs. G. H. Barnes, W. H. Prior, N. Hatt, and the secretaries, Mr. J. M. Bates and Mr. G. W. Judge, Mr. Bryden being voted to the chair.

As announced, the occasion was reserved for reading the essays submitted for competition by members of the Association, the prizes being two 1916 queens, to be given next season by Mr. V. E. Shaw, of New Eltham. Although this was the first occasion an innovation of this kind had been introduced it proved very successful, and resulted in several instructive and interesting papers being submitted.

The competition was divided into two sections:—

(A) Open to those in possession of a B.K.K.A. certificate of proficiency, and

(B) Open to all Members, exclusive of (A).

This division was made for obvious reasons.

Notwithstanding the fact that everyone is now working at very high pressure, five papers were submitted: one in section A and four in section B. These were submitted to Mr. J. Herrod-Hempsall for adjudication, whose awards were as follows:—

Section A. 1st—Mr. G. H. Barnes: "Why we get Honey."

" B. 1st—Mr. W. H. Prior on "The Errors of an Amateur."

" " 2nd—Mrs. Paulin on "The Social Side of Bee-keeping."

Section B. 3rd—Dr. C. Courteney Lord, Lieut., R.A.M.C., on "An Experience in the Removal of Bees during the Honey Flow."

Mrs. Paulin's paper on "The Social Side of Bee-keeping" dealt in a very entertaining way with the meetings which had been held under the auspices of the Crayford Association, and specially emphasised the importance of the social side of the work of any association. The prize essay by Mr. Prior followed, on "The Errors of an Amateur," dealing in a most interesting manner with the pleasures and difficulties of a novice. He introduced several good and somewhat original ideas, and his experiences should be of value to others who find themselves in similar circumstances. Mr. Prior's paper was well written, and as a novice of but two years' experience was very creditable; it certainly deserved the first place awarded by the adjudicator. In the unavoidable absence of Dr. Lord the secretary read his paper on "An Experience in the Removal of Bees during the Honey Flow." The removal of the apiary to a third of a mile away became necessary, owing to the great indiscretion on the part of the bees in attacking a ploughing team in an adjacent field. Dr. Lord describes very minutely the precautions he took to prevent loss of bees, and he certainly is to be congratulated on the success which attended his efforts.

Although Mr. Barnes's paper on "Why we get Honey" was the only one submitted for competition in section A, it was an exceedingly instructive essay, and the adjudicator stated he had no hesitation in awarding him the prize. Space, I fear, will permit but a brief review of this paper. I therefore must be content by quoting from his conclusions the following.—

> "To sum up, then, the service rendered to the flower by the bee, and the service rendered to the bee by the flower are to the advantage of each, and have the same object in view, *viz.*, the perpetuation of the race. Nature is ever bountiful and bestows her gifts with a lavish hand. It is upon these mutual requirements and lavishness that the bee-keeper depends for his honey, and if he has helped the bees, so much greater is likely to be his reward."

Mr. Herrod-Hempsall, in his comments, highly complimented the writers on the excellence of their papers, and after votes of thanks had been accorded, a very successful meeting was brought to a close.

In conclusion, I would like to commend the idea of Competitive Essays to the consideration of other associations. It not only provides an opportunity for individual members to assist their fellows in the many difficulties that beset bee-keepers, but it also tends to create a deeper study of the whole subject on the part of the competitors themselves, which naturally stimulates enthusiasm and further effort. Now that the winter evenings have arrived it is possible for many of us to write a short paper relating experiences and ideas which should prove of interest to fellow members, and (as Mrs. Paulin aptly says) "If we can't all win prizes, at least we can try."

I take this opportunity of enclosing a copy of Mrs. Paulin's essay, which I believe will be deemed well worthy of publication. It touches on a phase of our hobby that is often very much neglected, and indicates a sphere of usefulness which, if followed up, would go a long way in keeping associations in closer touch with their members. Why not endeavour to cultivate the social spirit to a greater extent than at present, to assist in attaining our common object, *viz.*, the improvement and advancement of bee culture? Will not the ladies come forward and help?—Geo. W. Judge.

[We hope to give Mrs. Paulin's essay next week.—Eds.]

"ISLE OF WIGHT" EXPERIENCES.

By J. Price.

(*Continued from page* 443.)

Having so far dealt with the various phases of this disease I trust by now many have discarded from their minds the futility of such a thing as the finding of immune stocks, or the possibility of disease-proof foreign bees being imported, and the vanity of attempting to cure badly diseased lots. Let us now consider what use we can make of the remedies that are already to hand, bearing in mind that these must be used more as preventives than as cures, and the important fact that this disease is more often developed in the late summer and autumn than at any other period.

It is very necessary that all stocks intended for treatment *must* be kept *scrupulously clean*, housed in hives that are waterproof—dampness being a great fault in cheap modern hives and a drawback to the healthiness of bees. Alighting boards sloping to the ground must be dispensed with to prevent crawlers again entering their hives. The ground round the hives must be kept clear of rubbish and dead bees, and sprinkled over occasionally with fresh slacked lime.

I knew a lady bee-keeper who used

insecticide, as used for green fly in greenhouses, for this purpose with apparent success. At any rate, it was a long time before her bees took the disease, whilst those belonging to her neighbours were all dying off. Of course, every bee that failed to reach the alighting board and dropped on to the powder was soon done for, and I should say disinfected at the same time. Drinking places must be provided, kept clean, and salt added to the water. For preference, I like two interchangeable floor-boards for each hive, changing these once a fortnight. It is not a difficult job to change them by lifting the brood chamber *en bloc* and replacing on clean disinfected board. I should by far prefer this treatment to the spraying of combs and quilts, a performance which is certainly not comfortable for the bees or brood, to say nothing of the attraction it gives to robbers when combs are exposed, and the risk of contamination of other stocks by the bee-keeper when handling combs.

In studying the various reputed cures that are on the market we shall notice that they comprise two groups, *i.e.*, those which cause fumes to permeate the brood nest, and which the bees are forced to inhale, and those which can be given to the bees in their food. Of the former I cannot yet convince myself how, by inhaling an odour through the spiracles, it can affect a disease germ lodged in the intestines. This kind of treatment certainly makes the bees uneasy, and renders them an easy prey to robbers, or else the bee-keeper finds the honey in his supers spoiled—tainted by the fumes. This is particularly noticed in mixtures of crude creosote, and is certainly the great failing of "Ayle's Cure."

Let us now turn our attention to the other class, *i.e.*, those remedies which can be given to the bees in their food. Some of these are quite as objectionable as the above. The greatest drawback to quinine is its bitter taste, which is also liable to spoil supers of honey if feeding is carried on up till the verge of the honey flow.

One cell is sufficient to spoil a whole super of extracted honey, whilst a tainted section sold will take a lot of explaining to avoid losing a customer.

There are two substances that seem to me to be on the right lines—Izal and Simmins' Cure, although I think these have not yet proved themselves to be *cures*. Bees certainly do not object to take them in proper proportion, and there is very little risk of either contaminating honey in supers or getting bees into that excited state which encourages robbers. Therefore, I say, let us cease dabbling with so many things and try only those things which common sense tells us are reasonable for treating such difficult creatures as bees, taking into consideration that they are producers of human food of rare quality. Many times have I said that if anyone cares to advertise a concoction as a sure cure for "Isle of Wight" disease he will always find some one simple enough to purchase.

After reading the Board of Agriculture leaflet on this subject, which tells us that early on the spores and parasites are simply lodged in the intestines, it seems to me that some drug to be given in the food ought to be found that will remove and destroy them at the same time.

To illustrate this point, suppose we have a stock of bees in early autumn which to all appearance are healthy, but we fear contamination from some neighbouring hive or apiary where disease is known to have been. Our bees at this time are mostly those which we expect will survive till spring, and we usually feed heavily at that time to provide them with stores for winter. Therefore, we can compel our bees to exist on medicated food till spring feeding is commenced. In fact, there is no reason why feeding should not be continued till supers are placed in position. In this case I can't see why some drug cannot be found which will remove the parasite and prevent the germination of the spores.

I know many cases where foul brood has been cured in this way by constantly supplying medicated food. Why not in "Isle of Wight" disease?

(*To be continued.*)

CORRESPONDENCE.

The Editors do not hold themselves responsible for the opinions expressed by correspondents. No notice will be taken of anonymous communications, and correspondents are requested to write on one side of the paper only and give their real names and addresses, not necessarily for publication, but as a guarantee of good faith. Illustrations should be drawn on separate pieces of paper. We do not undertake to return rejected communications.

SKEPS *VERSUS* FRAME HIVES.

(Pages 258 and 407.)

[9214] I am sorry I have no data to hand, so I hope Mr. Crawshaw will excuse dates, etc. Yes; there was a slight discrepancy over the way I inserted the word "extra" in copy, but I think I can

satisfy Mr. Crawshaw that I wrote in good faith, and as accurately as I could, as I have no wish, nor would I think of misleading anyone to start bee-keeping under false figures, or without due consideration of the present-day risks. In the skep case cited, the increase was obliterated, if I remember right, and although I agree with his reckoning in the main—I am out to claim the superiority for the frame hive for all purposes—I could not resist the opportunity of setting up a parallel on his method. To show how I mean, if I employ three men for the busy season, and they each have a lad to lend, it is hardly fair to say the men have accomplished so and so, and killing the youngsters would not wipe out the results of their labours: but why this killing? I can not see the sense of it. However, we have had this before, I will endeavour to make clear how the result was accomplished. In April, 1913, I found my one colony remarkably forward, and by about the 25th had eleven frames filled with brood, honey being stored in a rack of sections, supplied (built out). I had sixteen empty hives, and two swarms ordered, one by a lady pupil who had lost her first stocks, and Mr. Gamage was waiting to supply her. I had confidence in my own strain, so I decided to artificially swarm them, which turned out very successful, work hardly being retarded in the old hive, and I think about eight combs were left with the queen, the nucleus being moved two days before young queens were due. Warm weather still prevailing, I thought I must have a swarm for myself; three more combs were taken, one with younger brood, to form a nuclei. A comb with two queen cells placed with No. 2. For the time of year this had no apparent weakening result on the old stock. When the queens were hatching I managed to capture one, and place with a comb containing matured brood, and bees from a reserve stock; this had a little brood chilled at bottom, but nothing to speak of. I packed up all sides warmly, and fed these a little. Things went on so for a week or two. I was able to assure the customer the queen was being tested, which had the desired effect, and they were delivered at the end of May, and when I say they swarmed twice during July no one could accuse me of defrauding.

In the meantime a shallow frame box with drawn-out comb had been placed under the sections, and I think about the middle of June, or towards the end, on examination I found cells above and below the excluder (a wire bent in a Wilkes excluder). The queen had injured herself in some way, and was up in the shallow combs and apparently could not lay. This was disappointing. I left things until a cell hatched at bottom, and as a further experiment I shook a few bees, and started a nucleus with two shallow combs, which were hatching drones. I had a rare job to get rid of these—at least, I went the longest way to work. The nucleus had standard combs added as required, and was assisted by two frames of brood afterwards and what cleaning I had, and were wintered successfully on seven frames, no feeding otherwise. Nucleus No. 2 was now getting along nicely, and was supered with standard combs, not entirely new foundation, but by lifted-up frames of brood from bottom and extending as required. I think I secured more eggs by this means. Early in July I supplied the other as a "shook swarm," taking queen and one frame from the reserve, three frames from the hive with the big super, which supplied most of the bees. I replaced this queen with a fertile Italian, which is a fact I did not mention before, as I forgot it until the letter had gone, but as the stock was without eggs nearly a fortnight it should about balance. I think this is six, all told—the take of honey they managed between them. I had to extract some honey to introduce the Italian queen, and no other feeding was done whatever. The novice must not attempt or expect to create colonies like this; it was nothing more than a continual working on a good colony, in a good season.

I think a colony with a deep super very handy to have if worked like this for increase, as one can get just what combs one requires for success. I am wintering thirteen, and have sold three this season. I cannot vouch for honey sold, but have done well. Two swarms have been given for hiving as well.—A. H. Hamshar.

EXPERIENCES WITH "ISLE OF WIGHT" DISEASE.

[9215] The weekly correspondence on "Experiences with 'Isle of Wight' Disease" in British Bee Journal has interested me very much. I think it high time some desperate measures were taken to stem the advance of that fell disease ere the honey bee becomes extinct in the British Isles.

I would suggest that all bee-keepers give their bees the Izal treatment, the scent of this powerful disinfectant being attractive to bees.

First of all, hives, inside and out, should be well scrubbed with Izal in hot water, the bees and combs well sprayed with cool water and Izal (one teaspoonful to a gallon). Feed with Izalised food

and place tins and saucers of Izal and water about the apiary.

Next, steam the bees thus:—Take a tin with tight-fitting cover, half fill with water, and put in a few drops of Izal; through the cover put one end of a rubber tube, placing the other end inside hive entrance. Put the tin on a spirit lamp for a time, and allow to boil up, then steam the bees for three minutes (not more).

If all bee-keepers would treat their bees thus three times a week for a short period I feel convinced that if not entirely stopping the disease it would save many stocks.

I do not know of any disease being in this island yet, but am treating my bees as above as a preventive.

You must understand I am in no way interested in the sale of Izal, but the treatment is so attractive to the bees themselves, which is a great thing.—F. Neville Colebrook, Faldouret, Jersey, C.I.

"ISLE OF WIGHT" DISEASE. AND SUGAR SYRUP.

[ ] Your correspondent, Mr. Ryder, No. 9213, in last week's Journal attributes this disease in a great measure to sugar syrup. I think he will have to go further afield, as 40 years ago I used to winter my bees solely on sugar syrup, and I never had any disease in my stocks or stronger colonies of bees. Now for the last twenty years the bees have collected their own stores, they have been strong and done well, but they have all fallen victims to "Isle of Wight" disease, not one being left, and not only mine, but the whole in the village, including those in the roof of the Hall.—John R. Truss.

APPRECIATION.

Further to our note last week we quote several others of the many testimonials received as to the excellence of the British Bee Journal as an advertising medium:—

"After I advertised in the "B.B.J." I had many orders for lots of bees which I supplied, except two or three, but I sold fewer queens than two years ago—1914. I advertised in another Journal, but I had not received a single order."

"Please stop my advertisement in Bee Journal. I have already had so many answers, it will take me a day to answer them."

"Let me take this opportunity of expressing my satisfaction in regard to the results of this and other advertisements in your journal."

Notices to Correspondents

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Haysden (Kent).—(1)You may use more than one. (2) The most likely would be Mr. J. C. Bee-Mason, The Bee Farm, Bures, Suffolk.

Suspected Disease.

E. Coomber (Essex).—The bees have died from "Isle of Wight" disease. The honey is quite fit and wholesome for human consumption.

R. S. W. (Hummanby).—"Isle of Wight" disease was the cause of death.

Special Prepaid Advertisements

Two Words One Penny, minimum Sixpence.

Will advertisers please read these Rules carefully in order to save trouble, as they will in future be strictly adhered to.

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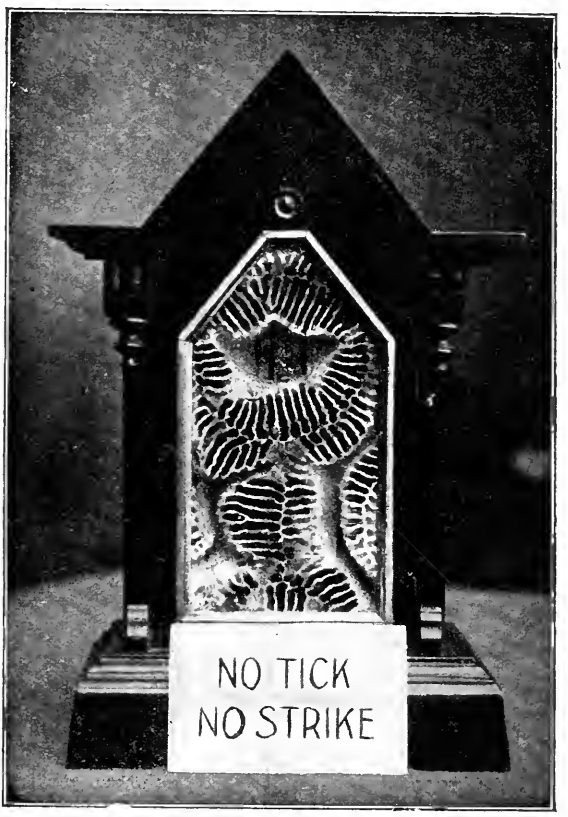
TEN exceptionally well made W.B.C. hives, two lifts each, well painted, 10s. each; twenty W.B.C. hanging frame section racks, complete with dividers, 3s. 9d. each; empty racks, shallow frames, or sections, 1s. 3d. each.—OWNER, "B.B.J." Office, 23, Bedford-street, W.C.

PHOTOGRAPH of Comb in clock-case from which 7 lbs. of Honey was extracted. Seventy pounds were abstracted from the hive also. These Bees were badly affected by "Isle of Wight" Disease and treated by M. C. Pay of Croydon, and cured by IZAL washing, spraying and Izalized food. He had the hive given to him to be destroyed, May 24th, 1912, on which day he began his treatment.

"In IZAL they had placed in their hands a worthy and formidable weapon for battling against the bacillus."—*Sir James Crichton-Browne, F.R.S.*



IZAL is supplied by Royal Warrant to H.M. The King.

2 Teaspoonfuls Izal Fluid to 1 gallon of water for washing and spraying New Queen Bee inserted on June 12th, 1912.

In September 77 lbs. Honey taken from them. At present, June, 1915, descendants of the original diseased bees are quite healthy.

IZAL

is a Reliable Remedy against Foul Brood.

Sold Everywhere in Bottles, **6d.** & **1/-** each.

Ask for full details of IZAL treatment sent post free by

Newton, Chambers & Co., Ltd., Thorncliffe, nr. Sheffield.

BRITISH BEE-KEEPERS' ASSOCIATION.

The Council of the British Bee-Keepers' Association are anxious to obtain gifts of honey for the wounded soldiers in the London Hospital, where it is urgently needed both for food and medicinal purposes. They will, therefore, be grateful for gifts of same, no matter how small, from bee-keepers throughout the British Islands. It is unnecessary to explain our obligations to these brave fellows, who have sacrificed health and limbs for the sake of our country. Gifts should be sent addressed to the Secretary, B.B.K.A., 23, Bedford Street, Strand. The donors' names will be published in the "B.B.J."

W. HERROD-HEMPSALL,
Secretary.

HONEY FOR THE LONDON HOSPITAL.

Amount received	188½	lbs.
Rev. F. S. F. Jannings	20	,,
Miss M. D. Sillar	10	,,
Total	218½	lbs.

Owing to a printer's error last week, the amount given by Miss Pinder—4 lbs.—was omitted.

BRITISH BEE-KEEPERS' ASSOCIATION.

There are many subscriptions still outstanding for 1915, and the Secretary would be very grateful to receive these as early as possible, so that he may make up his books. The following, culled from a letter received, is commended, not only to members of the B.B.K.A., but also to those of all County Associations:—"I enclose P.O. for 5s. as my subscription to the B.B.K.A. for 1916. I have a P.O. now, and perhaps I might not have one in January, but I do not want to see the Association go down." This from a man who has lost all his bees in two successive years from "Isle of Wight" disease, and also all his money which he had put by for a "rainy day."—W. HERROD-HEMPSALL, Secretary.

BELGIAN RELIEF FUND.

	£	s.	d.
Amount received	1	2	4

This fund will be finally closed at the end of the year. Will intending donors please send their "mite" as early as possible.

BLURTS FROM A SCRATCHY PEN.

THE FIRST CHRISTMAS AND THE BEES.

It was fiercely cold in the mountains of Judea, the snow glistened under the stars. So cold a winter was not in the memory of man. Painfully along the road hurried a man, humbly clad in the dress of a peasant. His companion was a female. In conformity with Roman edict they had been to enrol themselves in the neighbouring small town of Bethlehem, and so crowded was it, with others on similar business bent, that there was not room in the hostels; therefore, in what haste they could make, they were trying to reach the nearest village. And now midnight was near. A sudden snowstorm compelled them to take shelter in a stable near by the roadside, not tenantless, for an ox and an ass had refuged there, warming it with their breath, and, unseen in the roof tree, a swarm of bees had established themselves during the summer that had passed.

We know who were those two lonely figures; *we* know, too, that in that humble manger was laid "He who made the starry skies." So far is history. But the legend has not yet been told of the bees; how, in their humble insect way, they also reverenced the Infant Saviour.

It was the brilliant light, coming from no visible source, and the warmth that disturbed their winter clustering, and the older and wiser among them gathered together. "Say what this might mean," they asked, and, listening, they heard sweet singing, such as never had been heard before, and never again will be; songs that told of "Peace on earth and goodwill to all men"; songs that told how that feeble Infant, lying in the cradle-manger, was the Messenger of the new era of love and charity; songs of the angels whose brightness filled the lowly shed.

And, communing, the bees said, "Lo! the ox and the ass they cannot speak, yet in their eyes so meek, and by their humble attitude, they worship. What may we do?"

And a marvellous thing occurred; therewith there was a great commotion as at swarming time, and moving, they settled as in a swarm on the rack over where the Infant lay, and fanned their wings and sang their sweet hum as they are wont to do in times of gladness.

And it was given to the bees as a

reward that in future times to come man's hand should not be against them, but that they should be his friends and that he should care for them.

JNO. SMALLWOOD.

THE SOCIAL SIDE OF BEE-KEEPING.

[Essay read before Crayford and District Bee-keepers' Association, 22nd Nov., 1915, by Mrs. Paulin.]

In every society or association it is important to keep up the social side. The summer meetings of the Crayford and District Bee-keepers' Association would be very dull affairs if all the members merely met to listen to a lecture and examine the hives, then depart without the little chats with each other, and the cup of tea, which all together tend to make a delightful afternoon's outing.

In no other hobby is there found such "chumminess" as among bee-keepers. All the members know one another (or if they don't they speak as if they do) and chat freely of their triumphs and trials alike. And, oh! the hints one can pick up at a bee meeting, not only from the lecturer but from the members themselves, for who ever heard of a bee-keeper who would not give every assistance in his power to anyone who kept (or was desirous of keeping) bees? If you don't know how to make candy or a honey cake ask a fellow member, and so on through every branch of this delightful hobby you can get generous help all the way.

One of the chief delights of bee-keeping is the Summer Garden Meetings. How pleasant it is when you arrive on the lawn (after a long, hot and dusty walk) to see evidences of tea all around you, and a large party enjoying it. You find a comfortable deck-chair in the shade (or if you are a lady someone else provides it), and while you drink the "cup that cheers" and eat a piece of cake—made by a lady member—you join in the buzz of conversation. Later you go to the apiary and listen to the buzz of the bees, but do *not* join in.

The next item on the programme is the lecture; it always proves interesting and instructive. The lectures vary, taking up different phases, sometimes just the "Story of the Bee," which never grows old, and sometimes on some particular subject such as queen-rearing.

The competitions are a source of great interest to the members. We feel that if we can't all win prizes, at least we can try; and, at any rate, fill up the stall at the Honey Show, and the programme at the winter meetings.

By far the biggest event of the bee-keeping year is the Honey Show. What an interest we all take in that, and how we try to win prizes! After the judging, when you are admitted to the show tent, and the first excitement of trying to discover whether you have won anything yourself has worn off, you begin to take an interest in the other members' "luck," and stroll round the tent giving and receiving congratulations. The Honey Show winds up with the prize-giving, and we all clap heartily as the various winners go up to the table—some of them again and again.

There are all sorts of polite little speeches, and after mutual "pattings of the back" we go our several ways, thinking as we go of how hard we will work for certain prizes next Honey Show.

There are no "class distinctions" in bee-keeping. At the meetings we are all interested in the same subject, and no thought is given to whether a member is old or young, high or low. Our great ambition is to make new members, and I feel sure the best way to gain this object is to do our utmost to develop and maintain the social side of this most delightful and interesting hobby.

THE BEE.

I have received from a little niece, age about 13, the enclosed poem and joke, which I thought might be of interest to your readers. I have no idea where she has come across them, but she is very interested in everything connected with bees.—GEORGE H. PURDY.

THE BEE.

Oh busy bee
On wing so free,
Yet all in order true;
Each seems to know
Both where to go
And what it has to do.

'Mid summer heat
The honey sweet
It gathers while it may,
In tiny drops,
And never stops
To waste its time in play.

I hear it come,
I know its hum,
It flies from flower to flower,
And to its store
A little more
It adds each day and hour.

H. JALLAND.

Canvasser.—"Come, you're just the sort of man we want; and you've nobody depending on you."

Youth.—"Ain't I? Wot about my bees?"

LOCATION FOR APIARY.

We have received the following request from one of our readers. Possibly someone may be able to suggest a suitable locality through the medium of the JOURNAL:—

Could any of your readers suggest the best locality for bee-keeping? I am thinking of retiring from business and am not particular as to the county where I eventually settle. I should, however, like to be within such distance of the moors as to obviate removing my hives. I prefer quite the country, but within a mile or two of a railway station.—ENQUIRER.

We have several articles and letters in print, but owing to the space taken up by the Title and Index we are obliged to hold them over.

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G. E. W. (Glos.)—*Candy Making.*—It is not possible to say exactly how long the sugar should be boiled. You can only judge this by testing as advised in the Guide Book. Withdraw the pan from the fire, then with a spoon drop a small quantity of the boiled sugar on a cold plate. If, after a few seconds, the sugar does not stick to the finger when pressed into it and withdrawn, it is boiled enough; the finger must be dry. Or, instead of dropping it on a plate, drop a small quantity into a cup of cold water. If you can then work it into a little ball with the finger and thumb it is boiled enough; or use a sugar-boiler's thermometer and boil to a temperature of 235 deg. Fahr. This instrument costs about 7s. 6d.

Honey Sample.

A CONSTANT READER (Hartlepool).—The honey is a heather blend, but not quite first grade. It is rather thin, and has not been well strained.

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WANTED, second or third class honey; give sample and price.—T. McGEOCH, Broughallan Gardens, Renfrew. v 91

IRISH Honey for sale, 1lb. sections; also beeswax — CRAWFORD, Castlederg, Co. Tyrone. v 92

SOFT Bee Candy, medicated or plain, 1lb. glass top boxes, 7d., postage 5d.; 2lb., 1s. 2d., postage, 6d.; reduction for 7lb. and over.—SUGAR, "B.B.J." Office, 23, Bedford-street, W.C.

WANTED, cloth-bound copy "Bee-Keepers' Record." Vol. 7, year 1889.—HERROD-HEMPSALL, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WE have for sale a number of Bee Books, some very old; returnable list and prices will be sent for 1d. stamp.—MANAGER, "B.B.J." Office, 23, Bedford-street, Strand, W.C.

WANTED, good lantern slides on poultry-keeping.—Price and particulars to CHANTICLEER, "B.B.J." Office, 23, Bedford-street, Strand, London, W.C.

FOR SALE, ¼ plate Koilos camera, with Goerz Dopp anastigmat *f*/125 lens, can be used either for hand or stand work, twelve single dark slides and film pack carrier. The whole packs in stout block leather sling case, 9in. long, 6in. deep, and 2½in. wide; also light brass telescopic tripod, in leather sling case, all in excellent condition, and used by me to take the illustrations in "Helpful Hints" and "Continental Wanderings." The outfit for sale in one lot for £6; reason for selling have bought a Reflex. A splendid opportunity for anyone wanting a good reliable camera. Will send on approval; Deposit.—HERROD, "B.B.J." Office, 23, Bedford-street, Strand, W.C.